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ABSTRACT

A three-year trial of a voluntary quinmester plan for extending the school year began in June 1974 in five Knox County, Tennessee, schools. Curriculum revision, K-12, was the principal thrust of the ESY (Extended School Year) project, but administrators also hoped to relieve overcrowding in the schools and to effect more efficient use of professional staff and physical facilities. During the first two years of the program substantial progress was made toward standardizing curriculum goals and objectives and providing teachers with current instructional resources. However, with summer quinmester attendance on a voluntary basis, 13% of the students attended during the 1974 summer quinmester, and only 11% during the 1975 summer quinmester. Thus, overcrowding during the remaining quinmesters was not substantially reduced, and the additional expense of operating a summer program was not offset by economies effected during the regular school year. Reacting almost exclusively to financial considerations, the local board voted to cut short the extended school year experiment. (Author/MLF)

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EVALUATION OF
THE KNOX COUNTY EXTENDED SCHOOL YEAR PROGRAM
1975 - 76

Prepared for

KNOX COUNTY SCHOOLS
Knoxville, Tennessee

April 1976

Trudy W. Banta, Evaluation Director
George W. Harris, Jr.
Linda Higginbotham
Robert Howard
Lester N. Knight
John T. Lovell
O.K. O'Fallon
John R. Ray

EA 008 311

ABSTRACT

The record shows that year-round scheduling was tried, then discontinued, in five West Knox County (Tennessee) schools. However, a planned three-year trial of ESY (Extended School Year Program) in two primary and two middle schools and one high school was dropped after two years due principally to the extra costs involved in maintaining a Summer Quinmester with low enrollment (under 13 percent). Effective administrative support for year-round scheduling was withdrawn at the end of the first operational year.

ESY was soundly based on curriculum reform K-12: new goals and objectives were written, then five non-sequential 9-week modules were developed for each subject at each grade level. At least three-fourths of every group affected by ESY -- students, parents, teachers, administrators, a sample of registered voters -- liked having the schools open year-round. The program produced no significant change, certainly not a negative one, in student morale indicators such as attendance, dropout rate, disciplinary problems, school vandalism, and attitude toward school as measured by the "School Sentiment Index."

Metropolitan Achievement Test scores for grades 3, 5, and 8 were compared for the years pre- and post-ESY. After one year of ESY, reading achievement increased slightly, but scores in math, science and social studies declined slightly. ESY did not interrupt a three-year upward trend in the ACT Composite, English, and social studies scores at the high school. The ACT math average for juniors and seniors taking the test remained stable, and only the natural science score showed a decline after the first operational year of ESY.

Teachers and principals were almost unanimous in their preference for the new curriculum associated with ESY over the curriculum of previous years. A majority of students at each level (indeed two-thirds of the primary students) expressed the same preference. However, half of the parents sampled did not feel they knew how the new curriculum was working in their children's schools; only one third said the new curriculum was better than the old.

Increases in direct costs at ESY schools during the first year of program operation were not substantially greater than increases in the same categories at other schools in the Knox County system. The modest increases were viewed by the evaluators as justifiable in view of student benefits provided by extending the school year.

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SECTION I.

THE EXTENDED SCHOOL YEAR EVALUATION PLAN

A. INTRODUCTION

In June 1974 the Knox County (Tennessee) school system initiated a voluntary quinmester plan* for extending the school year. Year-round operation began in five schools (two primary, two middle, and one high school) in West Knox County's Farragut High School attendance zone. An E.S.E.A. Title III project grant provided partial funding for the Extended School Year Program (ESY).

The ESY project was undertaken primarily for the purpose of effecting an extensive revamping of curriculum in the participating schools. Since West Knox County at the time the program began was experiencing rapid growth of its school-age population due to in-migration of families with young children, ESY was initiated in that part of the county to provide some relief from overcrowding in the schools. Other secondary reasons for the extended school year trial included anticipated efficiencies in utilization of professional staff and physical facilities.

Between January 1974 and June 1975 substantial progress was made in developing a new curriculum organization for grades K-12 at the five ESY schools. Subject-area committees of teachers and supervisors developed broad goals for their areas, then more specific organizational level objectives, and finally series of curriculum packages or modules each of which was suitable for presentation during a 45-day quinmester. Administrators hoped that a successful trial of the related curriculum materials at the ESY schools would result in the eventual adoption of these materials at all Knox County schools.

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* The school year was divided into five nine-week segments called quinmesters. Each student was given an opportunity to choose which four of the five quins he/she would attend.

Knox County administrators were pleased with the first summer's (i.e., 1974) enrollment of almost 13 percent of the total ESY school enrollment because that appeared to be an excellent start toward the goal of 25 percent which they hoped to achieve in future years. If 25 percent of the students attended the Summer Quinmester, 5 or 6 percent might be expected to vacation during each of the remaining four quins, thus providing some relief from overcrowding. However the second Summer Quinmester (1975) attracted fewer students -- approximately 11 percent of the total enrollment -- than did the 1974 Summer Quin. Thus overcrowding was not noticeably lessened during the regular school year, and no staff reductions could be made during the other four quins as a cost-saving measure.

Knox County administrators were faced with the task of justifying an expenditure of over $200,000 for staff, transportation, and maintenance for a summer program which was not producing offsetting economies during the regular academic year. This was at a time when school budgets throughout Tennessee were being scrutinized to take advantage of every conceivable cost-cutting strategy.

During the same time frame a new high school and a substantial addition to one of the primary schools were begun, and it appeared that some of the overcrowding in the West Knox County schools would be alleviated by Fall 1976.

Lack of summer participation coupled with the prospect of a reduction in overcrowding though new physical facilities forced the Knox County school administration to recommend that the 1976 Summer Quinmester be dropped from the planned ESY trial.

While dwindling State and County revenues in the face of inflation cut short a 1974-76 trial of the year-round operation of five West Knox County schools, the evaluators found much about the ESY project to commend. All school administrators, and substantial majorities of teachers, students, parents, and a sample of registered voters in the Farragut area, were enthusiastic about the opportunity to utilize their schools for twelve months instead of nine. More than 90 percent of the students attending the Summer Quinmesters liked having the chance to be in school during the summer, and were pleased with their academic experiences. Questionnaire responses indicated that the opportunity to attend school during the summer fulfilled a need for some students and their parents. The Summer Quin also met the need of some faculty for year-round employment. Small summer classes provided an opportunity for individualization of instruction that could not be duplicated during the regular school year.

This evaluation report, then, does not focus primarily on programmatic failures which led to discontinuation of ESY, but rather attempts to provide a balanced treatment -- both pro and con -- of salient program components.

B. RELEVANT FINDINGS FROM EVALUATIONS OF OTHER EXTENDED SCHOOL YEAR PROJECTS

By Linda Higginbotham

Introduction

Despite the proliferation of year-round programs of all types, few have operated long enough, or had the opportunities, to evaluate carefully their success in realizing program objectives. Few have made conclusive assessments of their impact upon academic achievement, financial costs, or attitudes of students, parents, or staff.

As school administrators and school board members across the country consider year-round operation of their school systems, several crucial issues or concerns always seem to emerge as topics for debate. These concerns include:

1) Will student academic achievement benefit or suffer?
2) What will year-round operation cost? Can it save tax dollars?
3) What are the attitudes of the school community (i.e., teachers and administrators, students, parents, and voters) toward the implementation of year-round school programs? Will the community support year-round operation?
4) Can a curricular structure be designed that will accommodate a year-round program?

Reportedly, the burgeoning interest in year-round education has been stimulated by needs both for curriculum reforms and for alternatives to costly school construction needed as a result of increasing student populations. Feasibility studies conducted by local school districts and state departments of education cite the following rationales or advantages for year-round operation (Nygaard, 1974):

1. Schools that operate on a year-round basis can utilize facilities and resources more effectively and also reorganize the curriculum, thereby increasing the educational opportunities for students.

2. Overcrowding can be alleviated or avoided without the expensive construction of new schools. School districts that are fairly stable in population can discontinue use of outmoded facilities through more effective use of other school buildings.

3. Boredom and extensive learning loss over the long summer vacation can be avoided through the scheduling of shorter vacation spans.

4. Teachers can have the opportunity to practice their profession during the summer, thereby increasing their annual salary; or to pursue non-school work in business, industrial, or professional areas for short periods of time other than during the summer.

5. Shorter terms and courses can provide more variety in subject matter.

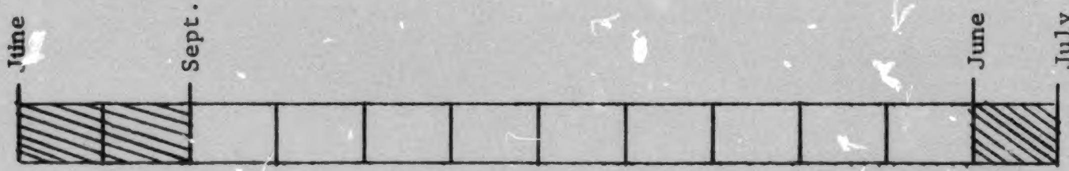
6. The shorter course is a refinement toward continuous progress in an ungraded class. Faster learners can continue through courses at their own pace. Slower learners will have more frequent opportunity for remediation; students who fail a course(s) are only 45 days, a quarter, a quinmester, etc. behind, not a full year.

7. Students can have the opportunity to attend school year-round for acceleration, remediation, or part-time employment.

School districts may have any combination of these or other objectives in mind when they choose to operate on a year-round basis. Year-round education is a general concept, and its greatest strength probably lies in its flexibility and potential to meet various needs through hundreds of different implementation plans.

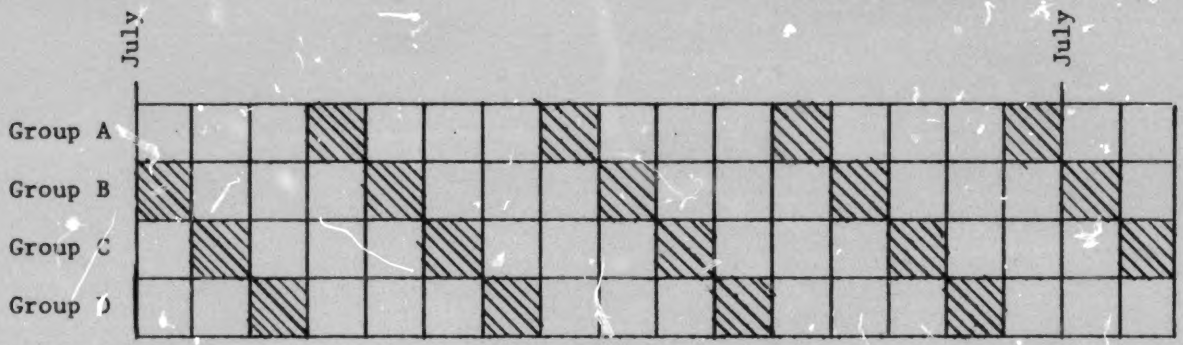
Three major plans -- 45-15, four-quarter, and quinmester -- are most frequently implemented by school systems attempting to efficiently utilize plant facilities, avoid construction costs, accommodate increasing student populations, and increase educational opportunities for students. Diagrams and brief explanations of the varying student attendance patterns involved in the plans are provided below because the most thorough research studies to date have been conducted by school systems operating under one of these three plans.

FIGURE I.1 - Traditional School Year



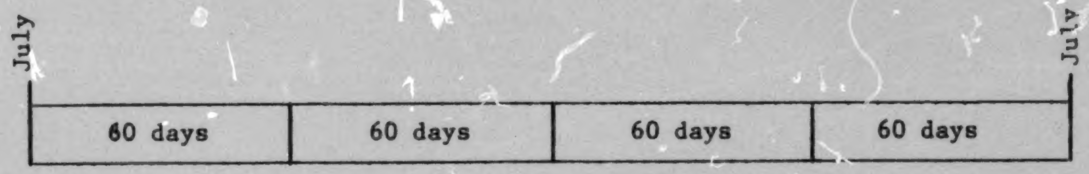
All students are in attendance the same 170-180 days between September and June and all have the common summer vacation between June and September.

FIGURE I.2 - 45-15 School Year



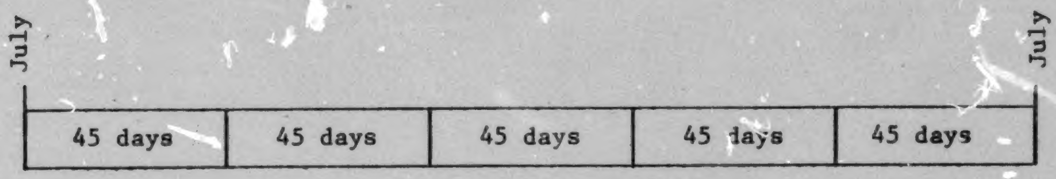
The student body is divided into 4 equal groups. Each block in Figure I.2 represents 15 days, thus the students attend school 45 days then have a 15 day vacation. One-fourth of the students are always on vacation, if the attendance plan is mandated. In addition to the advantages of the year-round programs listed previously, the 45-15 plan operating under a mandated rotating schedule makes it possible for three schools to accommodate as many students as would four schools under a traditional plan (McGraw, National Education Association (NEA), 1974). Thus a 33 percent facilities savings could result (Rice, Olsen, Parks and Parks, 1975, p. 4). Also the curriculum is typically redesigned so that instruction is flexibly packaged in 45-day segments. This plan appears to be most popular with elementary schools, and the most widely implemented of the various year-round programs.

FIGURE I.3 - Four Quarter School Year



Students attend school 3 of the 4 quarters. One-fourth of the students are always on vacation, if mandated. Some additional advantages of the four quarter plan (which is most popular at the secondary level) if mandated include: it provides four commencements each year, distributing graduates in the job market more evenly; it enables high schools to offer beginning and more advanced courses each quarter, as many colleges do, due to curriculum change; and it enables students to begin, interrupt, or complete their studies at any time (Punke, NEA, 1974).

FIGURE I.4 - Quinmester School Year



Students attend school 4 of the 5 time blocks. One-fifth of the students are always on vacation, if mandated. Advantages of the quinmester program include increased plant utilization, especially if mandated; a space saving of 25 percent if students are equally divided among the five quinmesters; acceleration of students who attend all sessions; greater flexibility to pupils in their curricular choices due to curriculum revision and full academic offerings provided each quinmester. (Rice, et.al., 1975).

The following review of literature examines the academic achievement of students, the attitudes of the school community (teachers and administrators, students, parents, and voters), and the financial costs incurred by school systems operating a year-round program according to a 45-15, four quarter, or quinmester plan.

Student Achievement

The Prince William County Public School District, Virginia, initiated a pilot 45-15 program with mandatory attendance in June 1971 as a financially reasonable means of accommodating a rapidly expanding community and student population. At the conclusion of the 1971-72 school year, the program was evaluated by means of an extensive opinion survey, a financial analysis, and a comparative study of academic achievement. Achievement gains of students were measured in a pre- and post-testing technique utilizing the Metropolitan Achievement Tests, 1970 Edition. The results of the study indicated that neither the year-round schools, the 9-month traditional schools, nor the 9-month modified curriculum schools could be conclusively credited with an advantage in raising achievement scores. The conclusion was qualified by the fact that the achievement gains were measured over a short period of time (less than four months) (Nygaard, 1974).

The Becky-David School, Francis Howell School District, Missouri, adopted a mandatory 45-15 plan in July 1969 as a means of meeting increased space needs. Achievement data were based on the administration of the Standard Achievement Test to fourth, fifth, and sixth grade students (35 at each level) attending Becky-David School and also a control school in the same district. The difference in gains between schools was found to be: (1) statistically significant ($p \leq .01$) favoring the control group in both reading and arithmetic at the fourth grade level, and (2) not significant in reading and arithmetic at the fifth and sixth grade levels. However, the Becky-David School qualified the fourth grade results by indicating that the control group at all levels had attended school a few weeks longer at the time of their achievement tests and that this advantage could account partially for the significant differences in gains (Nygaard, 1974). According to the project director, testing of students since 1970 has not shown any significant differences between the same groups (Ross, 1975).

During July 1971 the Chula Vista City School District, Chula Vista, California, initiated a mandatory 45-15 plan in 4 of its 26 elementary schools in an attempt to provide additional classroom space without incurring the costs of constructing a new school. A program evaluation was conducted after the first year of operation. Achievement data were obtained in a pre- and post-testing technique utilizing the Cooperative Primary Reading Test and the Cognitive Abilities Test. Achievement gains (between May 1971 and May 1972) were not significant at either the second or third grade level. A similar study compared reading gains achieved by matched pairs (matched by grade, sex, I.Q., and previous reading achievement levels) of second and third graders from year-round and traditional year schools. The results of this second study revealed that for the second grade the mean pre- and post-test differences between matched pairs of boys were not statistically significant, while for matched pairs of girls the mean differences were significant ($p \leq .05$) in favor of the traditional school girls. At the third grade level, the mean differences between matched pairs were not significant for boys or girls (Nygaard, 1974).

During June 1970 the Valley View School District, Illinois, initiated a mandatory 45-15 plan in all of its seven elementary schools as a measure for absorbing a rapidly increasing student population. Student samples stratified by grade, school, sex, attendance track, and academic quartiles were selected from each of the seven elementary schools in the school district. At Valley View (Nygaard, 1974), an unidentified pre- and post- achievement test was administered in April/May of 1970 (prior to the implementation of the 45-15 plan), 1971, and 1972. While all three tests (1970, 1971, and 1972) showed significant differences between the seven schools involved in the 45-15 plan, the pre- and post- test scores over a two-year period at each school did not change significantly. Changes not reaching significance were more often gains than losses. Despite the inability to show significant achievement difference over short time spans, Ronald Avary (NEA, 1974) believes the 45-15 plan provides opportunity for improving the student's educational program. The student is evaluated after every 45-day segment, and whether he/she has to repeat the segment or advances to another course is based on his/her pace commensurate with his/her abilities.

The Dade County Public Schools, Florida, (Nygaard, 1974) concluded that the implementation of a voluntary quinmester program in seven pilot schools during 1971-72 did not adversely affect student achievement as measured by the Stanford Achievement Test in reading and mathematics, and by failure rates in five subject areas. Conversely, however, it could not be proven that any increase in achievement was a result of the quinmester program.

Student achievement scores at the Loudoun County Schools, Loudoun County, Virginia (45-15 program) were obtained during the 1972-74 calendar years using the Metropolitan Achievement Tests in grades 1-3 and the S.R.A. Achievement Tests in grades 4-6. Results indicated that student achievement was not adversely affected; it may even have improved somewhat (Rice, et.al., 1975).

In summary, most studies incorporated achievement measures over too short a time frame to make results conclusive, but at least extending the school year did not seem to adversely affect student achievement. Of the previously identified school districts that had examined the academic achievement of their students after the implementation of a year-round program -- Prince William County, Virginia (45-15 plan); Dade County, Florida (quinmester plan); Valley View District, Illinois (45-15 plan); Loudoun County, Virginia (45-15 plan); and Chula Vista District, California (45-15 plan) -- none reported overall significant increases in academic achievement. That is, achievement for year-round school students was as good as for traditional year students.

Cost Analysis

Year-round school costs incurred by Prince William County Public School District, Virginia, (45-15 plan) (Nygaard, 1974) in 1971-72 were compared to the costs that would have been incurred in a traditional school year. The purpose of the study was to determine the long-range effectiveness of the 45-15 plan in reducing costs. Start-up costs were appraised and reported separately, but were not included in the general comparison of on-going costs. The analytical tool chosen for the financial analysis was selected with the idea of avoiding the problems inherent in the traditional budget reporting system, which fails to include any estimate of the cost of classroom and other building facilities in the evaluation of operational costs. The COST-ED Model was used as it includes both operating funds and capital resources in the evaluation of total consumption. A comparative study was conducted based upon the actual operating characteristics of the Mills E. Godwin Middle School during 1971-72. The cost of the resources consumed yearly, per pupil, under the 45-15 plan was compared to the cost per pupil under a simulated operation of the Godwin Middle School on a traditional plan. The cost of the 1971-72 school year's 45-15 program was $1,033.60 per pupil; had Godwin been operated under a traditional school program that year, the per pupil cost would have been $1,143.06. The 45-15 plan resulted in an estimated savings of $109.46 per pupil that year, or about 9.6 percent compared to the traditional-term program.

The following is a percentage breakdown of the 9.6 percent savings:

1. The teachers and aides who participated in the year-round project were given salary increases proportional to the increases in the length of their contracts. Their salaries were then 25 percent and 11 percent higher, respectively. However, these personnel taught one-third more classes due to the elimination of all non-teaching days for these staff members. The resultant 1 percent per pupil cost reduction was not considered to be necessarily a permanent one.

2. Support personnel were able to serve a one-third increase in student enrollment without additional help. All of these staff members not already on a 12-month contract were provided 12-month contracts, thereby increasing costs by 8 percent. Since one-third more students were serviced, a 1.9 percent pupil cost saving resulted.

3. A school building has four component costs: construction costs (principle based on bonds), financial costs (interest on bonds), operational costs (utilities and custodial services), and maintenance costs. Greater economy in all of these areas, through greater pupil use of the facilities under the 45-15 plan, resulted in a 4.2 percent pupil saving of $47.86. These savings were seen as being long-term in nature.

4. A 0.5 percent per pupil saving of $6.00 occurred due to the more efficient use of audio-visual equipment, classroom and library furniture, and other furnishings under the 45-15 plan.

From their research results, Prince William County concluded that the 45-15 plan had demonstrated significant savings and probably would realize greater benefits in the future. This conclusion, they cautioned, depended upon the efficient utilization or elimination of facility slack. If the system continued or became accustomed to having facility slack, the projected savings would not materialize. Start-up costs that amounted to $221,744.36 were incurred by Prince William County in initiating the 45-15 plan. Included in this amount was $5,400.00 for computer time donated by a private firm.

The financial evaluation of the Becky-David School in the Francis Howell School District, Missouri, (45-15 plan) was inconclusive as scattered data were collected, but not combined or interpreted in terms of per pupil costs. School officials concluded that there were no appreciable savings in operating costs; however, for the long term it was expected that new building costs would be reduced to 80 percent of what they would have been using the traditional year (Rice, et. al., 1975).

No formal financial evaluation was conducted by the Chula Vista City School District, California, (45-15 plan) (Nygaard, 1974) although during an interview the Assistant Superintendent reported that the greatest savings resulted by avoiding the purchasing of a land site, constructing a new building, and paying bond interest.

The Valley View School District (45-15 plan) (Rice, et.al., 1975) estimated the total tax avoidance in building construction costs at more than $10,500,000. It was found that the year-round school had apparently slowed the rising per pupil cost that generally accompanied school operation from year to year. Although there had been no real dollar savings per pupil, the 45-15 year-round school plan resulted in a smaller increase in cost per pupil as compared to the increase between the two previous years. The findings regarding teacher salaries indicated that there was a definite increase in teacher salary cost per pupil accompanying the 45-15 plan. This increase, however, was found to be overshadowed by other elements which appeared to decrease per pupil costs: (a) supplies and equipment, (b) other instruction costs, (c) principal salaries, (d) guidance and counseling, and (e) operation and maintenance. Alvary (NEA, 1974) stated that immediate savings of about 5 percent per pupil were attainable if per-pupil debt retirement were high and enrollment were rising rapidly.

Cost analysis of direct operating costs of the Loudoun County Schools, Virginia, (45-15 plan) utilized comparisons of teacher-pupil ratios, personnel costs, utility costs, and transportation, of two schools on the 45-15 plan and two schools on the nine-month schedule. The year-round program showed an average, approximate savings of $16.00/pupil over the nine-month program (Rice, et.al., 1975).

Northville Public Schools, Michigan, (45-15 plan) realized a 5.1 percent savings in operational costs using the 45-15 extended school year plan. Start-up costs would be negligible unless a costly in-service training program were included (Rice, et.al., 1975).

Research conducted for the Annville-Cleona School District, Pennsylvania, which was faced with the alternative of adopting a year-round program or constructing a new school building, indicated that (1) the 45-15 plan would save the district about $89 per pupil of total operating cost in the last 18 years of the 20-year term of the district's bond issue, and (2) for the first two years the saving would be $51 per pupil over the construction of a new building (NEA, 1974).

An increase in administrative duties often resulted from the implementation of year-round programs. Chula Vista School District in California and Valley View School District in Illinois (both 45-15) mentioned that the larger student population meant an increase in scheduling, record-keeping, and information dispersion. The pilot experience of the Dade County Public Schools (voluntary quinmester) indicated that their long-term goal -- to reschedule completely each student's program into 9-week units -- was impractical during the first year or two of implementation since the necessary support services and resources at the school and county levels were not available (Nygaard, 1974).

Weber surveyed 41 of the 45 schools across the United States which had utilized the 45-15 plan in one or more schools for at least one academic year in an effort to assess the operational costs. Suggestions that schools could be operated under a 45-15 plan at a lower cost were considered delusions which may mislead the taxpayers of a school district. The conclusions were: (1) Instructional materials and equipment costs do not increase because of the 45-15 plan, (2) Administrative costs do not increase proportionally, (3) Many districts (78 percent) went to the 45-15 plan in order to gain more classroom space, (4) The 45-15 plan is an efficient utilization of tax dollars, (5) It is not any more difficult to maintain the buildings that are in use twelve months, (6) There seems to be no major increase/decrease in the utility costs, (7) Insurance costs have not gone up because of the 45-15 plan, (8) School districts do not spend more money on capital outlay items, and (9) Transportation costs have not declined because of the 45-15 plan, and transportation insurance has not been increased because of extended usage of the buses (Rice, et.al., 1975).

The Dade County Public Schools (Rice, et.al., 1975) found direct costs at 19 voluntary quinmester schools were higher for the fifth (summer) quinmester ($154,700 or a $14,700 increase) than for the first four quinmesters ($140,000 each) but could be reduced to a comparable level by increasing the ADA from 10,000 to approximately 28,000. Direct costs per ADA for the fifth quinmester in 1972 were lower than for a comparable segment of the 1971 regular summer school program. Direct costs per ADA at 19 quinmester schools for the first four quinmesters were comparable to the direct costs per ADA at 40 non-quinmester secondary schools for the regular 180-day school year. Most (approximately 83 percent) of the costs of the 1972 fifth quinmester (summer) were due to students who were either accelerating their graduation, or who had opted out of a regular quinmester. These costs would have been incurred eventually and, except for slightly higher costs due to higher per ADA costs, the major effect was that the costs were incurred sooner.

For the Atlanta Public Schools operating under the optional four quarter plan, an estimate of 1973 fourth quarter (summer) costs was based upon measurable expenses above and beyond those incurred during the regular school year. The average additional daily costs for the fourth quarter (summer) were an estimated $3.44 per ADA at the elementary and middle school levels and an estimated $4.01 per ADA at the high school level. These figures included the cost of teacher salaries, utilities beyond those normally consumed during the summer months, and materials specifically purchased for use in the fourth quarter. There were large programmatic differences in costs, with ranges between $3.00 and $6.00 at the high school level and between $1.06 and $8.80 at the elementary and middle school levels. Schools with larger ADA's had relatively smaller daily costs per ADA and vice versa. The relationship was reported to be significant ($p \leq .01$) at all school levels (Nygaard, 1974).

Faced with rising costs, the Atlanta Board of Education was forced to raise the tax rate from 16 1/4 mills in 1961 to 30 3/4 mills in 1972, despite an increase in property valuation of 65 percent. Costs per pupil rose from $285.16 in 1960-61 to $786.92 in 1970-71. But these increases were part of an overall problem and did not reflect the cost of the four quarter plan as such (Anderson, 1972). Although the purpose of the Atlanta Public Schools was to improve educational opportunities for all students --

not to save money -- administrators believe there may eventually be some savings -- if, they caution, you measure expenditures against accomplishments. "But we never tried to hoodwink the public by telling them the plan would save," said Administrative Assistant Gillis. "Our whole emphasis is on curriculum" (Adams, 1970, p. 16).

Howe (NEA, 1974) stated that year-round schools make good business sense by (a) providing more efficient use of capital investments, (b) alleviating uneconomical and undesirable peaks in work and recreation, and (c) providing a more sensible way of looking at teacher salaries. Also, an operation offering the option of year-round employment with year-round pay to at least a portion of the district's teaching staff could increase teacher satisfaction by offering year-round employment to those who prefer it.

Callahan (NEA, 1974) stated that year-round schools have a place in the education process. However, unless state governments make fundamental reforms in educational financing, the fiscal pressures faced by large school systems prohibit them from instituting the rescheduled school year. Callahan documented municipal over-burden and showed how most suggested alternative methods of state financial aid discriminated against cities.

In conclusion, George Thomas aptly expressed the relationship between year-round programs and their costs when he stated: *"Quality education is not to be sacrificed, therefore supporters of an all year school plan are urged to combine the educational and economy objectives... It must be understood at the outset that no voluntary student attendance plan will ever release enough space and dollars to realize the economy objective"* (Thomas, 1973, p. 12).

The problem encountered when attempting to answer the question -- Does a year-round program save money? -- is that very little conclusive data on costs exists. Research studies may not even address the financial aspect, may provide only projections or estimates of savings, or may consider the costs secondary to curriculum improvements.

There is evidence that the 45-15 plan, which implies mandatory year-round attendance, does result in cost savings. For instance, estimated savings ranged from $109.46 per pupil or 9.6 percent (Prince William County, 45-15, includes operating funds and capital resources) to $89.00 per pupil (Annville-Cleona District, 45-15) to $16.00 per pupil (Loudoun County, 45-15) to 5.1 percent (Northville Public, 45-15). Estimated savings due to utilization of current space and not constructing new buildings ranged from 80 percent reduction in construction costs (Francis Howell District, 45-15) to total tax avoidance in construction costs of $10,500,000 (Valley View City District, 45-15) to $51.00 per pupil for the first two years of 20-year term bonds (Annville-Cleona District, 45-15). As can be seen from the foregoing, the range of estimated savings is great, due in part to a lack of uniformity in methods of calculating these savings.

School districts operating under a voluntary-year-round program found the cost per student in average daily attendance higher for the summer term due to lower attendance rates. For Dade County (voluntary quinmester plan) the cost of summer quinmester in 1972 was $154,700 compared to $140,000 each for the four regular quinmesters. However, direct costs per ADA for the fifth (summer) quinmester in 1972 were lower than for a comparable segment of the 1971 regular summer school program. The Atlanta Public Schools (voluntary four quarter plan) estimated additional costs for the summer quarter at $3.44 per ADA at the elementary and middle levels and $4.01 per ADA at the high school level.

According to Don Glines, year-round education coordinator in California, (the state with the most experience in the operation of year-round schools) the concept of year-round education can no longer be advocated as a money-saver. It must be sold as a philosophy best suited to meet the educational needs of today and tomorrow ("As California Goes....", 1976, p. 137).

Attitudes of the School Community

The various groups which have been surveyed concerning their attitudes toward the implementation of year-round programs have usually consisted of teachers and administrators, students, parents, and voters. Some school districts have surveyed only those individuals directly affected by a year-round program, while other districts have explored the attitudes of both participating and non-participating groups. The types of year-round programs involved include the 45-15 plan, the quinmester plan, and the four quarter plan. The following is a summary of the attitudes toward their respective year-round programs which have been expressed by groups in the school communities of numerous school districts that have attempted to extend the school year.

The Prince William County Public School District, Virginia, surveyed the attitudes of students, parents, and staff concerning the mandatory 45-15 plan. The results indicated that the majority of those groups directly affected by the plan favored it strongly. Sixty-seven percent of the students surveyed (4th and 7th graders) liked the plan, liked the more frequent vacations, and felt it had little effect on after-school activities. Seventy-two percent of the parents favored the 45-15 plan. Of the parents surveyed, fifty-five percent felt the 45-15 plan improved education for children, and 73 percent felt the plan should exist as a permanent program.

Of the staff members surveyed, there was a unanimous preference (100 percent) for the program among administrators, while 75 percent of the teachers preferred the 45-15 plan. Eighty-nine percent of the staff believed the program should continue, as they felt it provided a better educational program, required less review time by students, provided a desirable vacation schedule, and provided better teaching conditions. Parents', students', and staff's attitudes toward the program became more positive the longer the program was operational. The control parents, staff members, and fourth and seventh graders polled in other areas of Prince William County, who were not affected by the 45-15 plan, were not as supportive of the plan. In this case, only 52 percent of the parents, 73 percent of the school staff, 18 percent of the seventh graders, and 35 percent of the fourth graders reported that they would like the 45-15 plan (Nygaard, 1974).

The Becky David School (45-15 plan) in the Francis Howell School District, Missouri, concluded on the basis of a 53 percent return rate from questionnaires sent to parents that most parents felt the year-round program had helped their children learn. It was notable, however, that the percentage of parents who felt that way decreased with increasing grade level (Rice, et.al., 1975).

Second and fifth grade students in the Chula Vista School District, California, attending year-round (45-15 plan) and traditional schools were given pre- and post-tests during the 1971-72 school year to appraise any changes in their attitudes toward self (Self Appraisal Inventory) and school (The School Sentiment Index). The results indicated the traditional and year-round school boys did not differ significantly in their change of attitudes during the year, nor did second grade girls. Fifth grade girls differed in their change of attitude toward school (significant beyond .05 level of confidence), but not toward self. Attitudes of fifth grade girls toward school became statistically less favorable for traditional-year girls, while year-round school girls experienced slightly more favorable attitudes toward school. In October 1972 a Chula Vista study using fourth, fifth, and sixth grade students who had attended the full 1971-72 year-round program indicated that 65 percent preferred the year-round calendar and 35 percent preferred the traditional school year (Nygaard, 1974).

In the Chula Vista City School District (45-15 plan) Nygaard (1974) reported no measurable difference in teacher morale between year-round and traditional schools. Rice, et.al., (1975) reported that during interviews teachers repeatedly said they felt year-round school was good for children; teachers were very positive toward the year-round program as it affected them personally. Parents overwhelmingly demonstrated their support for the year-round school, as a survey showed that 17 out of 18 parents felt year-round school was academically better for children. Military families indicated that 86 percent preferred the year-round school to traditional year programs (Rice, et.al., 1975). Parent favorability increased significantly the longer the program was operational (53 percent during pre-interview as compared to 79 percent during post-interview) (Nygaard, 1974).

After the first two years of operation of the mandatory 45-15 plan (1970-71 and 1971-72), the Valley View School District, Illinois, conducted an evaluation of its program. As a consequence of the reported success of the elementary 45-15 plan, the Valley View High School implemented a 45-15 plan in July 1972. Since the results of the high school year-round program had not been evaluated at the time of this study, the following results pertained only to the elementary year-round program. The reactions of the students were the most stable -- "they started with somewhat negative feelings toward school and the 45-15 plan and the feelings remained so " (Nygaard, 1974, p. 24). Professional staff on the average showed increased acceptance of the 45-15 plan. Just as the staff had become more positive toward the 45-15 plan with time, so had the community. However, in contrast to the teachers, the community sample had not made sharp discriminations about various features of the plan. There existed a strong halo effect -- if they liked the plan, then they said good things about all aspects of the school program. In fact, it was not clear what was cause and what was effect (Rice, et.al., 1975). Alvany (NEA, 1974) also reported that the move to year-round operation was popular with economy-minded taxpayers and watchdog groups.

Secondary students of the Dade County Public Schools, Florida, participating in a voluntary quinmester program expressed a majority preference for the quinmester program. An advantage noted by 78 percent of the students was the greater number of courses available. The attitude displayed by the majority of teachers was positive. A majority of the teachers regarded the opportunity for immediate repetition of a course to be an advantage of the quinmester program, while the increased difficulty experienced in establishing rapport with students was the most frequently mentioned disadvantage (Nygaard, 1974). The principals unanimously credited the majority of parents with a positive attitude. The program had a positive effect on the community-school relationship in the majority of schools, in the opinion of the principals (Rice, et.al., 1975).

During September 1968 an optional four quarter plan was implemented in all of Atlanta's public high schools, and as of 1973 the fourth quarter (summer) had been implemented in 63 elementary and middle schools. The attitudes toward the four quarter plan adopted by the Atlanta Public Schools (Rice, et.al., 1975) were favorable. A majority of the parents interviewed felt that the quarter system was as effective as the system it replaced; parents liked the flexibility of the quarter plan; but parents did not approve of the 2½ hour block of time for classes, as they felt the attention span of many students might not be equal to so long a time. The students also liked the flexibility afforded by the quarter curriculum, particularly in being able to select courses according to interest, experiencing new teachers and classmates each quarter, and being able to graduate early. The teachers found the 2½ hour block required fewer preparations; there was more time for hands-on experience; there was time for varied teaching methods in the same period; and there was more daily time for students. A majority of the administrators polled expressed satisfaction with the 2½ hour block of time and the four quarter plan.

Loudoun County Schools, Loudoun County, Virginia, (45-15 plan) (Rice, et.al., 1975) found that a majority of parents preferred the year-round schedule and desired a 45-15 program at the high school so that all their children would be on one schedule. Some students preferred to return to the nine-month schedule, but they did not constitute a majority. A sizeable group of students preferred the 45-15 calendar. A strong majority of teachers were satisfied with working in the year-round program; a somewhat smaller majority thought it should be continued. Many teachers saw benefits to students in the program, especially in their own enthusiasm and better preparation.

An attitudinal survey of principals, students, teachers, other staff, parents, and the community at LeMesa-Spring Valley School District, California, (Modified 45-15 plan) conducted over a two-year period between 1972 and 1973 was very positive and opinion remained fairly stable (Rice, et.al., 1975).

The attitudes of participating and non-participating parents, staff members, and students of the Northville Public Schools, Northville, Michigan, (45-15 plan) were positive. The negative comments most frequently expressed by parents were that their children had no playmates during vacation periods, and that their children did not ride the same bus in the morning and afternoon (Rice, et.al., 1975).

In summary, the attitudes of the school community (teachers and administrators, students, parents, and voters) appeared to be positive toward the year-round school program. The attitudes tended to become more favorable the longer the program was operational as this afforded the affected groups of individuals more time to adjust to the changes necessitated by the implementation of a new school program. The advantages most frequently mentioned by the students were more frequent vacations, flexible quality of the curriculum as more courses were available, opportunity to graduate earlier, small effect on after-school activities, and opportunity to experience new teachers and classmates. A majority of teachers and administrators preferred the year-round program. Many believed it should be continued because they perceived that the year-round program provided a better educational program, a reduction in review time for students, a desirable vacation schedule, better teaching conditions, the opportunity for immediate repeat of a course, more time for hands-on experiences, and more involvement with students as a result of longer class periods in some specific programs. Teachers felt the program affected them positively in a personal way, and had a positive effect on the community-school relationship. Parents' attitudes toward the year-round program were positive, as they felt it improved education and thus was academically better for children, was as effective as the system it replaced, and provided flexibility.

Where a year-round program existed only at the elementary level in one school district, parents wanted the program extended to the secondary level so all children would be on the same schedule. This concern could possibly explain the findings of another study wherein the percentage of parents favoring year-round operation decreased as the grade level increased. Other concerns expressed by parents were that children had no playmates during vacation periods, did not ride the same bus to and from school, and the extended class periods of a particular program were too long to hold the students' attention. Attitudes of community members not directly affected by the year-round operation, although not as supportive as those of participating parents, tended to be relatively positive toward the programs.

Concluding Remarks (Nygaard, 1974)

Evaluations of year-round programs are both limited in number and generally inconclusive in nature. In most cases, the evaluations identify program outcomes that were dependent upon a particular interaction of educational variables. Researchers have had difficulty in isolating a year-round design (and its effects) from other variables (and their effects) such as classroom structure, curriculum design, and experience or expertise of teaching. Consequently, the measurable differences that have been recorded between year-round and traditional schools cannot be viewed conclusively as the result of year-round operation.

The outcomes of year-round operation also have been confounded by the disruptive effects of change. Studies that have been conducted after or during the first year of program operation have caught the staff and students in a period of transition or adjustment. This transition has been more disruptive for some programs than others, depending upon the adequacy of staff preparation, receptiveness of students and community, and the mechanics by which the program was implemented. In some cases, year-round schools have overburdened their systems by attempting to implement too many changes at once. Generalizations regarding the actual value or potential of the program design would be premature and misleading if based only upon initial results. Further research is needed after year-round schools have had an opportunity to develop stable programs, in order to obtain a more accurate picture of the effects.

In view of these precautions, six observations can be made at this time:

1. School districts have avoided or postponed large capital outlay for additional facilities and have reduced per pupil expenditure by some types of year-round operation.
2. Year-round operation has been accepted by an increasing percentage of staff, students, and parents as they have gained familiarity and experience with the new type of operation.
3. According to most measurements of performance, student achievement has not been significantly affected by the change to year-round operation.
4. Year-round operation has tended to result in increased administrative responsibilities.
5. Some family conflicts have developed when schools in a community have operated under different school year calendars.
6. Year-round operation seems to have facilitated or stimulated the development of individualized instruction in some cases.

C. SPECIFIC OBJECTIVES OF THE KNOX COUNTY EXTENDED SCHOOL YEAR PROGRAM

In November 1974 the evaluation director, in cooperation with the ESY administrative staff, developed a set of specific objectives for ESY. It was assumed that the objectives would be achieved over the three-year trial period originally planned for the program. In most cases, when comparisons over time are indicated in the objectives, data collected during the years of the ESY trial (i.e., 1974-75, 1975-76, 1976-77) were to be compared with baseline data from ESY schools for the three years of operation prior to ESY (i.e., 1971-72, 1972-73, 1973-74). Glass, Willson and Gottman (1975) have pointed out that it is difficult to identify trends in time series data with any confidence when fewer than 50 time points are available (p. 112). In several instances the ESY data did not yield measurements for more than six time points. Thus any conclusions based on these data are, of necessity, quite tentative. Nevertheless, in the absence of a control group -- which was just not feasible in this situation -- the quasi-experimental interrupted time-series design offered the best model for the ESY evaluation.

The ESY objectives were:

1) To provide a new curriculum which represents an improvement over that employed heretofore in the ESY schools in these areas:

    a) Student morale and motivation as evidenced by

        --- increased attendance

        --- lower dropout rate

        --- reduction in incidence of disciplinary referrals to principals

        --- reduction in vandalism, i.e., willful destruction of school property

        --- increased circulation of library books

        --- increased circulation of other instructional materials (particularly those available in the classroom)

--- attitude toward school (as measured by a standardized instrument designed for this purpose)

--- expression of the perception by at least a majority of the students that instruction is being individualized

b) Professional staff satisfaction as evidenced by

--- positive responses on the part of at least a majority of the staff to at least half of the queries about the new curriculum which may be included in questionnaires or interviews administered as part of the internal or external evaluation process

--- expression of satisfaction on the part of at least a majority of the staff that more curriculum materials have been made available through the ESY Program

--- expression of the perception by at least a majority of the staff that the new curriculum materials facilitate individualization of instruction

--- no appreciable increase in staff turnover

c) Student achievement as evidenced by

--- higher (or at least not substantially lower) group scores on standardized achievement tests

--- reduction in the proportion of failing grades given at Farragut High School

--- higher group scores on tests designed to measure aptitude for college work (e.g., ACT or SAT)

--- increased parental approval of the effects of the curriculum on their children

2) To provide an instructional program which is perceived by at least a majority of the administrators as easier to evaluate than the previous program

3) To provide student scheduling which will facilitate operation of ESY and not penalize the student who attends school during the summer quinmester

4) To provide an organizational structure which at least a majority of the professional staff perceives as supportive of ESY and the new curriculum

a) To explore role perceptions of administrators, supervisors, and teachers

b) To assess staff satisfaction

c) To explore communication and decision-making processes

    - d) To satisfy the perceived need for psychological and technical support for professional staff
    - e) To satisfy the perceived need for curriculum materials
    - f) To satisfy the perceived need for physical facilities essential to the program

5) To provide professional staff with a continuing program of orientation and professional development which is perceived by at least a majority of the staff as adequate to meet their informational needs

6) To provide more efficient use than at present of school facilities and professional personnel
    - a) To provide some relief from over-crowded facilities by reducing by at least ten percent the anticipated pupil enrollment during each of the four "regular school year" quinmesters (September through May)
    - b) To provide, over a period of years, sufficient reduction in capital outlay to offset the increased operational costs of the ESY Program

7) To produce an expression of a favorable attitude toward ESY on the part of at least a majority of those persons concerned about schools in the Farragut High School attendance zone through an appropriate information program
    - a) To produce an expression of a favorable attitude toward ESY on the part of at least a majority of the voting population in the Farragut High School attendance zone
    - b) To produce an expression of a favorable attitude toward ESY on the part of at least a majority of the students attending the five ESY schools
    - c) To produce an expression of a favorable attitude toward ESY on the part of at least a majority of the parents of the students attending the five ESY schools
    - d) To produce an expression of a favorable attitude toward ESY on the part of at least a majority of the professional staff associated with the five ESY schools

8) To document the feasibility of a five-term, optional attendance, extended school year program in a suburban Tennessee school system
    - a) To show that using a voluntary attendance plan, a summer quinmester enrollment of at least twenty-five percent of the anticipated total school enrollment for the coming year can be attained
    - b) To demonstrate that a quality educational program (with sufficient materials, equipment, and facilities) can be provided at a cost which the community is willing to bear

c) To determine the advantages and/or disadvantages of an extended school year program at the primary level, at the middle school level, and at the high school level

D. OBJECTIVES OF THE ESY EVALUATION

The ESY evaluation plan involved collection of data that would provide the basis for formative and summative evaluation relative to the specific program objectives listed in the preceding section.

Thus the evaluation activities could be grouped into four major categories:

1) Curriculum improvement and student scheduling to accomodate curriculum changes.
2) Organizational structure and professional development.
3) Facility usage and cost effectiveness.
4) Acceptance by Knox County voters and personnel associated with ESY schools.

Four teams of University of Tennessee College of Education staff members, each with expertise in one of these four areas, were formed to conduct the ESY evaluation. Curriculum improvement objectives were treated primarily by a team composed of Dr. Robert Howard, Dr. Lester N. Knight, and Dr. John R. Ray of the Department of Curriculum and Instructuion. Dr. John T. Lovell of the Department of Educational Administration and Supervision (EA&S) met with the Curriculum Committee to discuss areas of common interest, but conducted a separate evaluation of the ESY organizational structure and program of professional development.

Facility usage and cost effectiveness were studied by Dr. Kenneth O'Fallon of the Bureau of Educational Research and Service (BERS) and Dr. George W. Harris of EA&S. A voter opinion survey in selected areas of Knox County was conducted by Dr. Larry Hughes of EA&S and his graduate student Mr. Jerry Kondwros.

Overall coordination of the ESY evaluation, including assistance with some of the data-gathering instruments and processes, was the responsibility of Dr. Trudy W. Banta of the BERS.

In addition to the objectives for curriculum improvement previously identified, the Curriculum Committee established its own set of evaluation objectives during the second year of the project. The objectives were:

1. To ascertain the extent to which
    a) teachers were familiar with the content of Knox County Schools Instructional Goals and Objectives.
    b) teachers and administrators approved of the content of this document after a year of use.
2. To describe and assess the procedures used to determine
    a) the scope of the individual curriculum modules.
    b) the sequence of concepts or topics presented in each module.
3. To describe and assess the procedures used to determine the content (i.e., the development of the concepts or topics presented) of curriculum modules. (What resources were used? How was time allocated among concepts? How were learning activities chosen? How were the procedures for evaluation of pupil progress determined?)
4. To identify the components of the curriculum modules which teachers and administrators perceived as a) facilitators and/or b) constraints in implementing curriculum modules in the classroom.
5. To describe and assess the extent to which curriculum content was adapted to accommodate the varying learning styles of individual students.
6. To describe and assess the extent to which curriculum content was adapted to accommodate the varying academic achievement levels of individual students.
7. To determine the extent to which curriculum module development proceeded toward completion during the first two years of program operation.
8. To determine the extent to which curriculum modules were used by ESY teachers.
9. To describe and assess the system used by ESY administrators and supervisors to evaluate (i.e., internal evaluation) and revise the curriculum modules.

SECTION II.

PRESENTATION OF THE EVALUATIVE DATA

A. INTRODUCTION

This section of the evaluation report is organized according to the four major evaluative thrusts outlined in Section I, Part D, i.e.,

Curriculum Improvement
Organizational Structure and Professional Development
Facility Usage and Cost Effectiveness
Acceptance.

Within each of these areas data related to the specific ESY objectives are presented and analyzed in the order established for those objectives in Section I, Part C. Reports prepared by members of the UT evaluation team appear in this section as follows:

Curriculum Improvement -- Robert Howard
Lester N. Knight
John R. Ray

Organizational Structure and Professional Development -- John T. Lovell

Facility Usage and Cost Effectiveness -- George W. Harris, Jr.
O.K. O'Fallon

B. CURRICULUM IMPROVEMENT

Student Morale and Motivation

Attendance

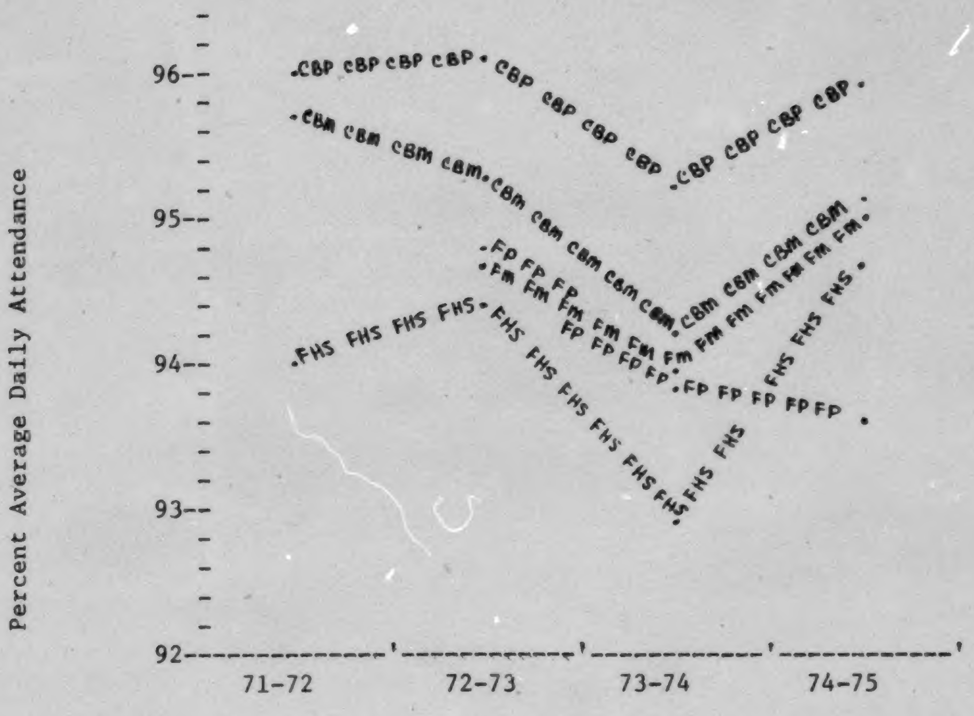
In specifying 'increased attendance' as one indication that the new curriculum associated with ESY had had a positive effect, project staff made the assumption that if students enjoy their academic work they will be motivated to come to school more regularly than if they consider school work dull, irrelevant, lacking in challenge.

Figure II.1 provides a graphic illustration of percent average daily attendance at the five ESY schools for the three years prior to initiation of ESY, and for the one full operational year to date: 1974-75. Attendance figures for Farragut Primary (FP) and Farragut Middle (FM) schools were not available for 1971-72 because these schools did not exist until 1972-73.

The figure shows that total ESY school attendance was quite high, and remained stable (a slight increase at two schools was offset by a decline at the third) between 1971-72 and 1972-73 at the three schools for which data were available. During 1973-74 attendance dropped at all five schools. Following the onset of ESY and the accompanying curriculum changes, attendance climbed at four of five schools. Two of the schools (FM and Farragut High -FH) experienced the highest average daily attendance of the four year period during the first year of ESY. However, total ADA for the five schools was slightly lower in 1974-75 than in 1972-73. And increased attendance at FH during 1974-75 may have been due in part to a change in grading policy (No credit is awarded a student who misses more than five classes in a subject if at least one of the absences is unexcused). Thus ADA figures for at least one more year of ESY operation must be inspected to see if the upward trend is maintained. The additional figures are essential to a valid conclusion about the effect of the new curriculum on average daily attendance.

FIGURE II.1

PERCENT AVERAGE DAILY ATTENDANCE FOR ESY SCHOOLS 1971-75



CBP = Cedar Bluff Primary
CBM = Cedar Bluff Middle
FP = Farragut Primary (school not operational in 1971-72)
FM = Farragut Middle (school not operational in 1971-72)
FH = Farragut High

Dropouts

Dropout statistics were assumed by ESY project leaders to be inversely related to student morale and motivation, i.e., if students' feelings that their needs were being met by the curriculum increased, the dropout rate should show a decrease.

Data reported in Figure II.2 indicate that while the number of dropouts at the five ESY schools did not decrease with the introduction of the ESY curriculum (i.e., in 1974-75), there was no significant increase. In fact, the dropout rate remained stable -- and very low -- in the primary and middle schools. And the increase in the number of dropouts at FH could probably be attributed to the new grading policy referred to above: marginal students who were never motivated to attend school regularly were pushed out due to academic failures resulting from the new policy. Had there not been the eighteen-fold increase in the 'lack of scholastic success' category, there would have been a decrease in the number of dropouts at FH between 1973-74 and 1974-75. Over the four-year period under consideration, employment and marriage were the principal reasons for leaving school given by FH students.

Discipline

In April 1975 the evaluation director and a research assistant visited each of the five ESY schools for the purpose of talking with principals and a sample of teachers about their perceptions of various aspects of the ESY project. Since it was assumed that students involved in their school work would get into trouble less often than those bored with the curriculum, the evaluation plan involved asking principals about the incidence of disciplinary referrals from teachers during the years 1971-75.

The ESY principals were not, in general, able to say that ESY had caused an appreciable difference between 1974-75 and the three previous years in the number and seriousness of disciplinary referrals in their schools.

FIGURE II.2

NUMBER OF DROPOUTS AT ESY SCHOOLS 1971-75

SCHOOL	CBP				FP				CBM				FM				FH				
YEARS	1	2	3	4	*1	2	3	4	1	2	3	4	*1	2	3	4	1	2	3	4	FH Totals
Parental Indifference			1						1											1	1
Misbehavior									1										5	3	8
Employed									2								9	6	9	6	30
Marriage											1				1		4	7	11	5	27
Lack of Scholastic Success												1						2	1	18	21
Suspended																2	3		1	2	6
Military Service																	2	2	3	1	8
Totals	0	0	1	0	*	0	0	0	4	0	1	1	*	0	1	2	18	17	30	36	

YEARS: 1 = 1971-72, 2= 1972-73, 3= 1973-74, 4 = 1974-75

* School not in operation during 1971-72

Disciplinary referrals to principals were down in 1974-75 at two of the schools, but one of these principals said the change could not be attributed to ESY; and the other said that while ESY might have been a factor in the decrease, a new policy of staff and staff-parent conferences on individual behavior problems had undoubtedly had an influence also.

The principals were in agreement that discipline was not a problem at all during the 1974 Summer Quinmester. One principal voiced the opinion that students who attended the Summer Quin had such a positive experience that their attitudes toward school in general improved. However, the number of students attending the Summer Quin was not great enough to produce a significant impact on overall student attitudes and behavior during the regular school year.

Vandalism

Students pleased with what is going on in their school should be less likely than those who are discontented to engage in willful destruction of school property. Thus a reduction in vandalism at ESY schools during 1974-75 might be viewed as an indication that students were more satisfied with their school experiences in the ESY program than they were formerly.

When principals of ESY schools were interviewed in April 1975, however, they were not able to attribute to ESY any change in the number or seriousness of incidents involving vandalism at their schools. Break-ins and other instances of property destruction in 1974-75 had declined from the level of the previous three years at one school, had increased at two schools, and had remained the same at two schools. No pattern was discernible in these data.

Circulation of Library Books

Information concerning circulation of library books and other instructional materials was sought as part of the evaluative data because it was assumed that increased circulation might be indicative of an increase in interest and independent activity fostered by the ESY curriculum changes.

Librarians at the five ESY schools provided the following data in April 1975 and January 1976:

FIGURE II.3

NUMBERS OF LIBRARY BOOKS CIRCULATED* AT ESY SCHOOLS 1971-75

	1971-72	1972-73	1973-74	1974-75
Cedar Bluff Primary	20,872**	50,288	58,036	54,402
Farragut Primary	7,290***	21,304	23,048	27,808
Cedar Bluff Middle	Not Available	Not Available	34,158	33,171
Farragut Middle	29,000	31,403	21,541	23,372
Farragut High	8,793	7,829	10,454	14,791

*Figures do not include circulation by individual teachers of books and materials housed in classrooms.

**Library opened in mid-year; circulation limited to one book due to small collection.

***School opened in mid-year and library was used for only nine weeks.

Although 1974-75 circulation at the Cedar Bluff schools showed slight declines from 1973-74 (perhaps indicating a decrease in the number of books read for pleasure), librarians generally agreed that the ESY curriculum changes had increased the use of library references. At the elementary level the use of learning centers and task cards to promote individualized learning were considered responsible for the increase. Middle and high school librarians noted that the new curriculum modules focused on particular topics for longer periods of time, thus increasing depth of exploration and, consequently, use of references.

Three of the five librarians considered their collections inadequate to meet the reference requirements of the new curriculum. All had experienced some difficulty in accommodating simultaneous requests for the same materials by two or more teachers using the same modules.

Circulation of Other Instructional Materials

When a sample of teachers at each of the five ESY schools was interviewed in April 1975, the consensus among those questioned was that the ESY curriculum had not produced a significant increase in usage of instructional materials other than library books (particularly those materials available in the classroom). Usage of the ESY modules had created a situation in which more teachers were teaching the same topic than ever before. As a consequence, waiting lists had had to be devised for curriculum materials and these had caused frustration at all the schools. The necessity of sharing classroom texts among several classes was particularly troublesome to middle school teachers.

Attitude Toward School

Administrators responsible for ESY objectives made the assumption that if the new curriculum worked well and was perceived as valid and relevant by students, those students would exhibit a positive attitude toward school when given a standardized instrument designed to measure this variable.

Materials developed by the Instructional Objectives Exchange (IOX, a clearinghouse established in 1968 by the UCLA Center for the Study of Evaluation) were selected as the most appropriate instruments for measuring student attitude toward school at the ESY schools. IOX uses a criterion-referenced approach in item development, i.e., items and measures are directly related to school objectives. This permits assessment of the status of groups with regard to these objectives both before and after an educational treatment.

Primary schools. At the primary level IOX "attitude toward school" objectives include:

1. (Comprehensive) Students will exhibit favorable attitudes toward school by indicating agreement with questions that reflect positive perceptions of the teacher, school subjects, peers, social structure and climate of the school, behavior associated with learning, and school in general; and disagreement with questions that reflect negative aspects of the same dimensions.

2. (Teacher) Students will indicate positive attitudes toward teachers by responding "yes" to questions reflecting positive aspects of teacher behavior in terms of fairness in authority and effectiveness of control; adequacy and fairness of instruction and grading; consideration, friendliness, and concern in interpersonal relationships with the students; and "no" to questions reflecting negative aspects of the above.

3. (School Subjects) Students will exhibit positive attitudes toward school subjects by responding "yes" to questions regarding positive inclinations toward activities in reading, oral and written language, art, music, arithmetic, and science; and "no" to questions regarding negative inclinations toward the above.

4. (Social Structure and Climate) Students will indicate favorable attitudes toward the school social structure and climate by responding positively to questions concerning positive student perceptions of the bureaucracy, school organization, traditions, and activities; and negatively to unfavorable aspects of the above.

5. (Peers) Students will indicate positive attitudes toward peers in school by responding "yes" to questions presenting positive aspects of the openness of peer group friendship patterns (fairness of equality and social acceptance), friendliness, social distance, and stratification; and "no" to questions presenting negative aspects of the above.

6. (General) Students will indicate a positive attitude toward school in general by responding "yes" to questions regarding positive aspects of the holding power of the school: feelings about being in school, remaining home from school, and going to school; and "no"

to questions regarding negative aspects. (IOX. Attitude Toward School K-12. Rev. ed. Los Angeles: IOX, 1972, pp. 21-22).

The "School Sentiment Index - Primary Level" is designed to provide measures of the attitudes specified in objectives 1-6 above. The self-report device consists of 37 questions divided almost evenly among five subscales: (1) Teacher, (2) School Subjects, (3) Social Structure and Climate, (4) Peer and (5) General.

The "School Sentiment Index - Primary Level" (SSI-P) can be administered to grades K-3. To simplify administration of the instrument in the ESY schools, third grade students were chosen to represent attitude toward school at the primary level. In March 1975, principals at Farragut and Cedar Bluff Primary schools (FP and CBP, respectively) provided each third grade teaching team with sufficient copies of the SSI-P for administration to all students in their group. More students were enrolled in the ESY schools during the fourth quinmester -- which included the month of March -- than any other time during the year. Due to student absences and other problems, however, the response rate was still less than 100 percent of the total third grade enrollment. At CBP 205 third graders, or approximately 89 percent of those enrolled, completed the SSI-P. At FP 179, or about 88 percent of the third graders, turned in questionnaires.

For a number of reasons caution must be exercised in interpreting student responses to "School Sentiment Index" items as evidence for or against the ESY program with its associated curriculum. First, the SSI was given to students in the ESY schools for the first time near the end of the first year of the new program's operation. Since no measure of student attitude toward school prior to initiation of ESY was available, there is no way to tell whether ESY produced an improvement or a decline in favorable attitudes. The evaluators had hoped to measure student attitude again in the third year of the program to see if institutionalization of the new curriculum had contributed to any changes in attitudes over time. But without this second measure, any conclusions based on the March 1975 administration of the SSI are, of necessity, tentative.

A second reason for caution in interpreting SSI scores as relevant data concerning the impact of ESY is that there was no attempt to isolate reasons for particular student attitudes toward school. It is safe to assume that the total school milieu (to which students were responding in the SSI) was not changed dramatically by the introduction of ESY. Yet students were not asked to specify the conditions responsible for the attitudes they expressed on the SSI. Thus ESY must be seen as just one of many school atmosphere variables (e.g., the administrators and their policies, the teachers, school facilities, morale, emphasis on academic achievement, etc.) having an impact on student attitudes toward school. The SSI contains subscales designed to isolate attitudes in several of these areas, but each of the attitudes affects the others, and it is the interaction effect which is not measured in the present investigation.

Finally, ESY curriculum modules were not developed for language arts and mathematics at the primary level. Relatively new approaches in both subject areas were already being tried before ESY was launched. Since much of the primary student's day is devoted to study in language arts and mathematics, the impact of ESY on the primary curriculum must be considered minimal.

Perhaps the strongest statement that SSI data could be said to substantiate is this: IF ATTITUDES TOWARD SCHOOL AMONG STUDENTS AT ESY SCHOOLS WERE FOUND TO BE GENERALLY FAVORABLE, THEN AT LEAST THE NEW PROGRAM DID NOT EXERT A SIGNIFICANT NEGATIVE INFLUENCE.

March 1975 responses to the SSI at the two primary schools participating in the ESY project indicated that indeed third graders -- representatives in this instance of all the primary students -- had a very favorable attitude toward school. School subjects apparently constituted the most positive aspect of their school experience, a finding which could be construed as evidence favorable to the ESY case. The average positive response rate for items in the "School Subjects" subscale was 82 percent; for the "Social Structure and Climate" subscale 78 percent; for the "Teacher" subscale 73 percent; for the "General" subscale 67 percent; and for the "Peer" subscale 66 percent.

On just 2 of 37 SSI-P items did the percentage of positive responses fall below 50 percent. Two-thirds or more of the students at CBP and FP reported that other children got them "into trouble" at school, and that when they were trying to do school work other children "bothered" them. Both of these items were classified in the "Peer" subscale of the SSI-P and they contributed substantially to the low ranking of that subscale in the hierarchy of five in the ESY situation.

With regard to their school subjects, the ESY third graders exhibited the most positive attitudes (favorable response rates of 86 to 88 percent) toward art, social studies, reading, and science, in that order. Significantly, three of the four most popular subjects were those in which ESY-associated curriculum modules had been introduced during 1975. Math and "writing stories" were less popular, but even so, 70 percent of the third grade respondents indicated they liked these activities.

With regard to the "Social Structure and Climate" subscale, roughly nine of ten third graders considered the rooms in their school "nice", and the grown-ups at school "friendly" toward children, and felt there were "a lot of things to do at school". Seven of ten felt that other people at school really cared about them; fifty-seven percent agreed that "nice things happen at ... school every day."

Third graders in the ESY schools felt strongly (94 percent agreed) that their teachers "cared about" them. Ninety-two percent said their teachers liked to help them with their work when they needed help. Only about a fourth of the students were "afraid to ask (their teachers) a question." However, sixty-five percent were "bothered" by the feeling that teachers did not give them "enough time to finish" their work.

Eight of ten third grade students said school is "fun". Almost three-fourths of the third graders reported that they liked "being at school," and only a quarter found school "boring". On the other hand, almost 40 percent would have liked "to be somewhere other than school right now," and 55 percent liked "to come to school every day."

Apparently the primary students liked each other very much but did tend to get each other into trouble. Ninety-six percent of the third graders said they liked "the other children" in their class. Ninety-two percent had their "own friends at school." Eighty-six percent considered the other children in their class "friendly", and only 18 percent felt "lonely at school." "Do your classmates listen to what you say?" produced an affirmative response of 65 percent. However, two-thirds said other children got them "into trouble" at school, and three-fourths said other children "bothered" them when they were trying to do their schoolwork.

Data derived from the SSI-P indicate that third grade students who began the 1974-75 school year with the Summer Quinmester had, in general, more favorable attitudes toward school then their peers who began at the "regular" time, i.e., in September. There was no difference in summer students and "regular" students with regard to the "Social Structure and Climate" and "Peer" Subscales, but on the three other subscales there was at least a small difference in average positive response rate in favor of the summer students. The greatest difference between the two groups appeared in the "General" subscale. On 5 of 7 items in that subscale, the favorable responses of summer and regular students differed by 10 or more percentage points. Fifteen percent more third graders who attended the Summer Quin liked "being at school." Twelve percent fewer summer students wished they "could stay home from school a lot." Ten percent fewer summer students considered school "boring".

One might speculate that the positive attitudes toward school exhibited by students attending the 1974 Summer Quin were due to the satisfying academic experiences they had as a result of summer attendance. This may have been one factor in the attitudes they expressed on the SSI-P, but ESY teachers and principals felt that those students who elected to try out the first Summer Quinmester were generally children who liked school and had positive attitudes toward learning before they were ever exposed to the ESY program. Again, the most valid conclusion about ESY effects that can be substantiated by the data is that at least ESY did not constitute a significant negative influence on the attitudes of primary [redacted] the first summer session.

In August 1975 during the last weeks of the second Summer Quinmester students in grades 3 and 4 at CBP and grade 3 at FP were asked some of the SSI-P items which had most distinguished the 1974 Summer Quin third graders from their regular school year classmates when the SSI-P was administered to third graders in March 1975.

Comparisons based on SSI-P items in the General subscale indicated that 1975 Summer Quin third and fourth graders were much less positive about school than were 1974 Summer Quin third graders. On five General subscale items responses of 1974 Summer students were more positive by an average of 9 percentage points. There is evidence that this difference was due to the presence in the summer session of a different group of students in 1975 rather than to any negative influence that might be attributed to ESY. While there were significant response differences between the two sets of summer students, the 1975 Summer students responded to General subscale items in a manner virtually identical to that of all third grade students who responded to the SSI-P in March 1975. That is, the 1975 Summer student population appeared to be more like a random sample of all 1974-75 third graders -- both 1974 Summer participants and their regular school year peers -- in their general attitudes toward school than like the unusually positive third graders who attended the 1974 Summer Quin.

On one of the five General subscale items referred to above ("Is school boring?") 72 percent of both Summer '75 third and fourth graders and the 1974-75 third grade class (including 1974 Summer participants) said 'No'; on a second item ("Do you like being at school?") there was a response difference of one percentage point ('75 Summer - 74% 'Yes', '74-'75 third grade - 73%); on the other three general items the response percentages differed by two, three, and four percentage points, respectively, with the two larger differences being in favor of the Summer '75 group.

In addition to General subscale items, the 1975 Summer Quin third and fourth graders were given other SSI-P items that showed them to be more confident of peer approval and less afraid to ask their teachers questions or to be sent to the school office than were 1974 Summer Quin third graders.

Again, the attitudes of the Summer '75 group appeared to be more like those of the whole '74-'75 third grade class.

Only 8 of 25 CBP fourth graders attending the '75 Summer Quin had also gone to the 1974 Summer session. Responses of repeaters could not be isolated due to the anonymity guaranteed all SSI-P respondents. Thus it could not be ascertained whether attitudinal differences for the two summer-attending segments of this class were due to changes attributable to ESY or other school-related factors, or merely to pre-existing student differences. Findings cited above in connection with general attitudes point to the latter conclusion, however. At any rate, that segment of the 1974-75 third grade class which formed the 1975 Summer Quin fourth grade at CBP differed somewhat from the segment that attended the 1974 Summer Quin in that they liked their teachers and school in general less, and were more self-confident in their dealings with peers and with school personnel.

The favorable attitudes found among third and fourth graders attending the 1975 Summer Quin gave an indication that the new ESY curriculum had not had a significant negative impact on attitude toward school at CBP or FP; but 1975 Summer students differed from those who attended the 1974 Summer Quin in that they held a less positive view of school in general.

Middle schools. In March 1975 the IOX Instrument "School Sentiment Index - Intermediate Level" (SSI-I) was administered to all sixth grade teams -- chosen to represent middle school students -- at Cedar Bluff (CBM) and Farragut (FM) Middle schools. The SSI-I is a series of statements to be marked "true" or "untrue" by intermediate level students. These statements are designed to determine student perceptions of the various aspects of school, rather than to merely report conditions objectively. The self-report device consists of 81 statements related to five aspects of attitude toward school: 1) Teacher (which is further subdivided into "Mode of Instruction", [teacher] "Authority and Control", and [teacher] "Interpersonal Relationships with Pupils"), 2) Learning, 3) Social Structure and Climate, 4) Peer, 5) General. These subscales are designed to provide measures of attitudes related to school objectives specified by IOX. The middle school objectives are virtually identical to those outlined above for the primary school, with one exception: the primary "School Subjects" objective is replaced by a "Learning" objective.

> 3. (Learning) Students will indicate favorable attitudes toward learning by expressing agreement with statements describing interest and/or involvement in learning-related activities of the following type: homework, new or difficult activities and assignments, independent pursuits of learning activities, and extra school work; and disagreement with negative statements.

Conclusions based on SSI-I data concerning the effect of ESY on attitudes toward school at CBM and FM must be considered tentative because (1) no pre-ESY attitudinal measure was available for comparison, and (2) many conditions interact to determine attitudes, but no attempt was made in the evaluation to isolate the effects of ESY from competing determinants (for a fuller discussion, see the preceding "Primary schools" section).

At CBM 282, or approximately 91 percent, and at FM 209, also about 91 percent, of the sixth graders returned usable SSI-I instruments.

Figure II.4 provides a comparison of the average favorable response percentages calculated for ESY sixth graders on the five subscales of the SSI-I.

Sixth graders at CBM and FM were most positive about their peers -- a complete reversal of what was found at the primary level. They liked working with their classmates, and they regarded school as a good place for making friends. Developmentally, middle school youngsters are more peer-oriented than primary children, and the SSI revealed that indeed the feelings expressed by students at CBP and FP about peers getting them "into trouble at school" or "bothering" them were much less pronounced at CBM and FM (half the middle school youngsters said other students got them "into trouble" or "bothered" them, while two-thirds of the primary children responded similarly).

FIGURE II.4

PERCENTAGES OF ESY SIXTH GRADERS RESPONDING FAVORABLY TO ITEMS IN THE FIVE SUBSCALES OF THE "SCHOOL SENTIMENT INDEX-INTERMEDIATE LEVEL"

Subscale	All 6th Graders	Summer 1974	Regular 1974-75
Peer	73	73	73
Teacher	67	67	67
Learning	63	66	63
Social Structure & Climate	63	65	63
General	51	57	50

Their responses to SSI-I items revealed that the ESY sixth graders were least positive about general aspects of school; approximately half of the students said they would prefer to be somewhere other than in school. More than two-thirds agreed that "most school days seem like they will never end." The fact that 68 percent of the middle school sample disagreed with the statement "I don't like school because it's too much work," may be an indication that a significant proportion of the students considered school too easy.

Responses to items in the Learning subscale of the SSI-I seemed to have the most relevance for judging the effects of the ESY curriculum on attitudes of middle school students. The average favorable response percentage for the subscale was 63 -- indicating a relatively positive set of attitudes for this pre-adolescent developmental level. As might be expected of this age group, only 26 percent of the respondents said, "I like to do my homework," and 44 percent agreed with the statement "I would rather do almost anything else than study." But 83 percent felt it was "fun" to learn new things; and almost three-fourths reported that they did quite a bit of reading on their own.

CBM and FM sixth graders who began the 1974-75 school year with the Summer Quinmester had more favorable attitudes on three of five subscales -- Learning, Social Structure and Climate, and General -- than did their peers who began their school year in September 1974. Item response differences of ten percentage points indicated that Summer Quin participants were more interested in studying and more willing to do homework than their peers who attended the regular school year. Thirteen percent more (62% vs. 49%) summer students were willing to say "I'm very happy when I'm at school." Twelve percent more (67% vs. 55%) summer students reported liking school "because there are so many fun things to do." At the primary level, any attempt to attribute the positive attitudes of summer participants to the effects of ESY must be tempered by the knowledge that middle school faculty and administrators considered those who attended the 1974 summer session to be persons who generally felt good about school anyway. Certainly it could be said that ESY did not have a significant negative impact on the attitudes of Summer '74 participants.

The same generalization could be made about the impact of ESY on the attitudes of Summer '75 participants. As in the primary schools, students attending CBM and FM during the 1975 Summer Quinmester were given an opportunity in late August to respond to those SSI-I items which in March 1975 had most differentiated 1974 Summer Quin sixth graders from their classmates who began their school year in September 1974.

Middle school Summer Quin students sampled in 1974 and in 1975 had more in common than did the two groups of Summer Quin students sampled in the primary grades. Responses of 1975 Summer Quin students in grades 4-8 at FM and 5-8 at CBM were within 7 percentage points of those given by sixth graders in the 1974 Summer Quin on 10 of 15 SSI-I items. On six items from the General and Learning subscales -- those most indicative of the impact of ESY -- the average response difference was only four percent. This similarity is rather remarkable since students in grades 4-8 were being compared with sixth graders alone.

The responses of 1974 Summer Quin sixth graders were within 7 percentage points of the responses of their classmates (40% of the 1975 Summer seventh grade at both schools was composed of returnees from Summer 1974) attending the 1975 Summer Quin as seventh graders on 9 of 15 SSI-I items. Summer '75 students differed most from Summer '74 students in the area of self-confidence: 1975 students felt more secure about peer relationships and were less afraid to "tell my teacher when I don't understand something." However, more 1975 Summer Quin students were afraid to go to the office at CBM and at FM than were their 1974 counterparts.

Farragut High School. Tenth graders were chosen to represent high school students in the evaluation of attitudes toward school associated with ESY. As at primary and middle school levels, materials developed by the Instructional Objectives Exchange at UCLA were used to measure attitudes at Farragut High. In March 1975 English teachers at FH were asked to have all tenth graders complete the "School Sentiment Index-Secondary Level" (SSI-S) in their English classes. Usable forms were submitted by 345 sophomores, or approximately 78 percent of the sophomore class.

The SSI-S is a self-report instrument designed to determine student perceptions of various aspects of school. Secondary students are presented with 82 statements concerning school-related attitudes and are asked to mark a strongly agree, agree, disagree, or strongly disagree response category. Separate subscale scores may be calculated for each of five aspects of attitude toward school: 1) Teacher - subdivided into Mode of Instruction, Authority and Control, and Interpersonal Relationships; 2) Learning; 3) Social Structure and Climate; 4) Peer; and 5) General. Subscale items are directly related to student objectives, and these objectives for the SSI-S are identical to those already stated in the "Middle Schools" and "Primary Schools" sections of this report.

Figure II.5 provides a comparison of the average favorable response percentages calculated for ESY sophomores on the five subscales of the SSI-S.

FIGURE II.5

PERCENTAGES OF FARRAGUT HIGH SOPHOMORES INDICATING FAVORABLE ATTITUDES TOWARD FIVE ASPECTS OF SCHOOL AS MEASURED BY THE "SCHOOL SENTIMENT INDEX-SECONDARY LEVEL"

Subscale	All Sophomores	Summer 1974	Regular 1974-75
Peer	72	69	72
General	67	74	66
Learning	62	65	62
Teacher	53	60	52
Social Structure & Climate	51	51	51

Apparently ESY tenth graders and ESY sixth graders shared very similar attitudes toward Peers and Learning: the rank order and even the response percentages associated with these subscales were virtually identical as calculated for the two classes. There similarity ends, however, since sophomores had much more positive attitudes on the General subscale than did the middle school sample. And sixth graders held much more favorable attitudes toward their teachers than did sophomores. Attitudes associated with Social Structure and Climate were among the least favorable for both groups of ESY students, but the percentage of favorable responses on this subscale was much lower (by 12 points) for sophomores.

The Learning and General subscales of the SSI-S appeared to provide the best measure of the effect of ESY on students' attitudes toward school. The fact that approximately two-thirds of the ESY sophomores held favorable attitudes in these areas could be construed as a plus for ESY. However, no prior measure of attitudes was available to indicate how instituting ESY may have changed sophomores' feelings about school; and there was no attempt to isolate ESY from the many other determinants of attitudes expressed on the SSI-S. (For a fuller discussion of these problems see the preceding "Primary Schools" section.) Therefore, the most soundly based conclusion that can be derived from SSI-S data is that at least the ESY project did not have a significant adverse effect on the school-related attitudes of FH sophomores.

The General subscale was second only to the Peer subscale in level of approval. Ninety-two percent of the FH tenth graders agreed with the statement, "It is clear to me why I shouldn't drop out of school." Three-fourths or more agreed with five other items designed to assess the importance the students attached to attending school. Only 28 percent, however, agreed that "Each morning I look forward to coming to school." (This may be compared to the 39 percent of sixtn graders who responded affirmatively to the same item, and to the 55 percent of third graders who said they liked "to come to school every day.")

Responses of sophomores to Learning subscale items indicated that ninety percent recognized relationships between things observed outside school and content of school subjects. More than three-fourths of the tenth grade respondents agreed with the statement "My favorite classes, regardless of subject, are those in which I learn the most."

A need for more electives at FH was suggested by the fact that 81 percent of the sophomores agreed with the statement, "There are important subjects not taught in school now which I would be interested in taking if they were offered."

The most negative response on the Learning subscale was a predictable one: 81 percent of the sophomores agreed with the statement, "I hate having to do homework."

FH sophomores who began the 1974-75 school year by attending the Summer Quinmester generally displayed more favorable attitudes toward school, as measured by the SSI-S, than did their peers who began the school year at the usual time, i.e., in September. Positive differences in favor of the summer students were most pronounced on the General and Teacher subscales.

General subscale items produced the largest differences between summer and regular students. Twenty percent more summer students agreed with the statements "I enjoy learning in school more than learning on my own." (71% to 51%) and "Each morning I look forward to coming to school." (45% to 25%). On a series of items designed to reveal students' perceptions of the value of their schooling in relation to their future plans, summer students' responses were more positive by margins of ten to twelve percentage points.

While the average response percentages on the Learning subscale were not significantly different for summer and regular year students, there were individual items related to learning on which the two groups differed by more than ten percentage points. Analysis of these items indicates that the summer students were more independent in their approach to learning, more motivated, more likely to go beyond their school assignments to learn on their own. For example, 16 percent more Summer '74 starters (81% to 65%) than September '74 starters agreed with the statement "Sometimes I just can't put a book down until I'm finished with it."

FH teachers and administrators felt that the students who attended the 1974 Summer Quinmester were as a group, more motivated and more positive about school than an equal number of their classmates selected at random would have been. Therefore, their positive reactions to SSI-S items cannot be attributed entirely to the effects of their participation in the ESY project. Certainly ESY does not appear to have had a noteworthy negative influence on the group's enthusiasm, however.

The same statement might be made concerning the effect of ESY on the attitudes of FH students who attended the 1975 Summer Quinmester. As at primary and middle school levels, in August 1975 students attending the Summer Quin at FH were asked to respond to that subset of SSI-S items which in March 1975 had produced the most differentiation between sophomores who had attended the 1974 Summer Quin and their classmates who began their year in September.

The Summer '75 students in grades 9-12 were not as positive about school in general as were the Summer '74 sophomores. But neither were they as negative (speaking relatively, since the majority response for neither group was negative in more than a few instances) as the "regular year" sophomores.

For instance, the response of 1975 Summer Quin participants to the item "Each morning I look forward to coming to school," was less favorable than the 1975 Summer sophomore response by 6 percentage points, but more favorable by 13 points than the response percentage for sophomores beginning in September. Likewise, on the item, "Most of my teachers give assignments that are just busywork," Summer '75 students responded less positively than the Summer '74 sample by 8 percentage points, but more positively than "regular year" sophomores by a margin of 6 points.

The fact that attitudes expressed by Summer '75 participants were not as favorable as those of Summer '74 participants and yet more favorable than the attitude toward school expressed by September starters suggests that the difference between the two summer groups was due more to a difference in the character of the two groups (i.e., their pre-existing attitudes) than to any detrimental changes produced by ESY. The character of the groups could not have been expected to be identical, even at the sophomore level, since only 40 percent of the eleventh grade in the 1975 Summer Quin was comprised of Summer '74 returnees.

When all SSI-S items were considered, the following generalizations were evident: 1975 Summer Quin students were not as interested in reading or in running for a student body office, or in school in general, as were 1974 Summer sophomores; but the 1975 Summer sample held more favorable attitudes toward their teachers and displayed more self-confidence than their 1974 counterparts.

Individualization of Instruction

"Instruction Questionnaire" at FH. One of the principal goals of the curricular revisions associated with the ESY project was individualization of instruction. Curriculum modules were to be designed with suggestions for making the content understandable and interesting for students of differing achievement levels and learning styles. Knox County administrators felt that one of the ESY curriculum objectives should be the expression by at least a majority of the students of the perception that instruction was being individualized.

An extensive review of existing curriculum evaluation instruments revealed only one that focused specifically on individualization of instruction. The "Instruction Questionnaire" by Jack L. Hunter was designed for high school students, so the initial administration was to sophomores at Farragut High in March 1975.

The "Instruction Questionnaire" was given to tenth graders in their English classes. The instrument requires the respondent to focus attention on a single class. In order to provide a representative sampling of the extent of individualization in the primary academic subjects offered to FH sophomores, each English teacher was asked to divide his/her class so that approximately one-fourth of the students were responding in terms of an English class, one-fourth in terms of a science class, one-fourth in terms of a social studies class, and one-fourth in terms of a mathematics class. Completed questionnaires were collected from 348 students, or about 80 percent of the FH sophomore class.

The fourteen items of the "Instruction Questionnaire" provide a detailed characterization of individualization from one point of view. The instrument could only provide a valid assessment of individualization in a situation in which the teachers and administrators shared the same view of what individualization should entail. While ESY teachers and administrators were given an opportunity to review the "Instruction Questionnaire" and approved it prior to its administration, there was no other proof that ESY goals with respect to individualization were indeed congruent with the goals implicit in the "Instruction Questionnaire."

Figure II.6 contains the "Instruction Questionnaire" items with the response percentages for the FH sophomores.

FIGURE II.6

PERCENTAGES OF FARRAGUT HIGH SOPHOMORES RESPONDING 'YES'
AND 'NO' TO "INSTRUCTION QUESTIONNAIRE" ITEMS

YES	NO	
60	40	1. "In the first few days of this class, I was told exactly what I would learn and how well I would be able to do the work when I finished."
30	70	2. "In the first few days of this class, I was given a test to see how much I already knew about the subject."
13	87	3. "In the first few days of this class, my teacher and I tried to decide how fast or slow I might be expected to learn this subject."
15	85	4. "In the first few days of this class, my teacher and I tried to decide how I could learn this subject best."
7	93	5. "In this class, it was decided for me to skip over the things that the test showed that I already know."
7	93	6. "In this class, it was decided for me to study extra topics that are not the same as the other students."
18	82	7. "In this class, it was decided for me to work as fast or as slowly as I need to learn the subject."
10	90	8. "In this class, it was decided for me to use some study materials or equipment that are not the same as the other students use."
21	79	9. "In this class, I use assigned study materials to learn without paying any attention to what the other students are doing."
69	31	10. "In this class, my work is often checked to see if I am doing as well as I am expected to do."
44	56	11. "In this class, after my work is checked, I am told if I have done as well as I am expected to do and what I should do next."
6	94	12. "In this class, the teacher lets me plan the work for myself."

FIGURE II.6 (Cont.)

YES	NO	
10	90	13. "In this class, the teacher plans the work just for me."
3	97	14. "In this class, the teacher and I plan the work just for me."

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With only two exceptions, substantial majorities of sophomores indicated negative perceptions of the extent to which the kinds of individualization specified were actually taking place in their classes. Sixty percent of the students responded positively to the item "In the first few days of this class, I was told exactly what I would learn and how well I would be able to do the work when I finished." Almost 70 percent said 'Yes' to the item "In this class my work is often checked to see if I am doing as well as I am expected to do." But 97 percent of the sophomores said 'No' to the item "In this class, the teacher and I plan the work just for me." Negative responses to the remaining eleven questionnaire items ranged from 56 to 94 percent of the sophomore respondents.

Sophomores who began the 1974-75 school year with the 1974 Summer Quinmester appeared to have slightly more negative perceptions regarding the extent to which instruction was being individualized than did their classmates who began the school year in September. Summer students responded more negatively than their classmates on 8 of 14 "Instruction Questionnaire" items. These negative perceptions were particularly noteworthy in view of the fact that the summer students in general expressed more positive attitudes toward school, as measured by the "School Sentiment Index," than did their classmates.

If indeed the "Instruction Questionnaire" was a valid instrument for assessment of the extent of individualization of instruction taking place at FH, then the curriculum objective related to individualization was not achieved during the first year of ESY operation. Majorities of FH sophomores apparently felt that course objectives had been clearly outlined and that their progress toward meeting those objectives was being effectively monitored. But they did not feel that they had had a significant role in determining the objectives or in developing their own plans for achieving the objectives. Discretion must be exercised in extrapolating from the sophomore data to other classes at FH, but the sophomores at least did not perceive that their teachers were "taking the student where he is and assisting him, through methods and materials appropriate for his learning style, to attain the maximum achievement level which his capabilities will allow," -- a paraphrase of popular educational jargon concerning individualization.

It is essential to note that individualization of instruction is exceedingly difficult to accomplish in an over-crowded classroom. ESY did not significantly reduce class size at FH in 1974-75, and consequently many teachers had to deal with classes of 35 or more students. Significant progress toward achieving the goal of individualization of instruction cannot be expected until class size is reduced at FH.

Items for primary and middle school students. If the ESY project had continued for three full years the evaluators would have developed a modification of the "Instruction Questionnaire" for use at the primary and middle school levels. In the absence of detailed instruments to measure the extent of individualization below the high school level, three questions bearing on this concept were designed for inclusion in a more general reaction form administered to third and sixth graders at the ESY schools in March 1975.

The same items were given to FH sophomores and seniors, and thus serve as something of a confirmation of "Instruction Questionnaire" findings.

First, students in grades three, six, ten, and twelve were asked directly if they felt their learning assignments were designed "just for" them. This item was followed by two questions bearing on use of library books, tapes, films, records, and other learning materials. Increases in usage of such materials are associated with the institution of independent study projects. Responses to these questions at each grade level are given in Figure II.7.

FIGURE II.7

PERCENTAGES OF STUDENTS IN ESY GRADES 3, 6, 10, AND 12 RESPONDING 'YES' TO ITEMS RELATED TO INDIVIDUALIZATION OF INSTRUCTION

Item	Grade 3	6	10	12
1. Do you have the feeling that your learning assignments are just for you instead of being for everyone in the class?	25	21	9	17
2. Have you used more library books this year than ever before?	62	47	38	22
3. Are you using more tapes, films, records, and other learning materials this year?	68	71	43	22

The response of sophomores to the question dealing directly with individualization of learning assignments confirms the results derived from the "Instruction Questionnaire". Seniors' responses to the question were almost twice as positive as those of sophomores, but the percentage of seniors confirming the presence of individualization in their classes was still quite low (17 percent). Individualization was a reality for only a quarter of the primary students and 21 percent of the middle school sample.

These results are even more damaging to the ESY goal of individualization when March 1975 results are compared with responses to virtually the same question asked of another sample of students at primary, middle and high school levels in October 1974 -- just five months earlier in the same school year. In October the following percentages of students at each level were willing to say that their learning assignments seemed to be tailor-made for them: primary - 63 percent, middle - 60 percent, and secondary - 44 percent.

Speaking generally, majorities of third and sixth graders at the ESY schools in March 1975 believed their use of a variety of learning materials had increased with the initiation of the new curriculum associated with ESY. Unfortunately it was not possible to tell precisely whether this increase was due to an upswing of individualized learning assignments or simply to a trend on the part of teachers to make assignments for whole classes based on utilization of a variety of media rather than the traditional single textbook. Responses to the first question on individualization strongly suggested the latter explanation.

Not surprisingly in view of their other responses concerning individualization, sophomores and seniors at FH did not perceive that their utilization of library and other learning materials had increased with the initiation of the new curriculum associated with ESY.

Staff Satisfaction With New Curriculum

General Response to New Curriculum

During the Summer and Fall of 1974 teachers and principals employed at the ESY schools during those quinmesters were asked to complete questionnaires that gave them a chance to express their opinions regarding many aspects of the new curriculum materials associated with ESY. A detailed analysis of these responses was included in the 1974-75 evaluation report, but the conclusion derived from all the data was that a substantial majority of the staff approved of the new curriculum. In effect, the ESY terminal objective in this area had been met in 1974, thus no new questionnaires containing items similar to those administered in 1974 were distributed to all ESY staff members in 1975.

However, in December 1975 the Curriculum Committee of the ESY evaluation team, composed of Professors Robert Howard, Lester N. Knight, and John R. Ray, prepared a series of questions regarding the curriculum which they asked of a sample of teachers at each of the ESY schools. The responses to these questions summarize teacher reaction to the curriculum after a year of classroom trial.

ESY CURRICULUM EVALUATION, 1975-76
Primary Schools

By Lester N. Knight

Introduction

The ESY Curriculum Evaluation, 1975-76, report is based on a series of interviews with a group of randomly selected teachers from Farragut Primary (FP) and Cedar Bluff Primary (CBP). The sample of six teachers from CBP represented approximately 20% of the total teacher population. Although selection was random, some attempt was made to select an equal representation of teachers according to the following criteria: (1) Level taught and (2) Degree of involvement (little or none, some, much) in the development of the curriculum modules used in the ESY project.

The primary level curriculum in language arts and mathematics had been revised just prior to the development of ESY curriculum materials. Thus the responses of primary teachers were based on their experiences with modules in science, social studies, health, music, art, and physical education, but not math or language arts.

Each interview was conducted using an interview guide and the reactions of the teachers are summarized below according to the proposed objectives for the 1975-76 ESY Curriculum Evaluation.

Objective 1

To ascertain the extent to which (a) teachers are familiar with the content of Knox County Schools Instructional Goals & Objectives and (b) teachers and administrators approve of the content of this document after a year of use.

Familiarity with this document apparently varied considerably. While some teachers were conversant with the content developed through direct work with it or occasional reference to it, others admitted to very little familiarity, some saying only "may have read them." Still others appeared to resort to circumlocutionary discussion of the document's contents.

Comments regarding the contents of this document were generally positive. The content was said to represent a total look at the program which lends depth, breadth, commonality, and continuity to the program. The categorization and labeling of the objectives, as well as their orientation to process rather than content, were also perceived as strengths. However, there was some feeling that the demands implied in the objectives might not be too realistic and that they were sometimes hard to apply, particularly at lower levels.

Objective 2

To describe and assess the procedures used to determine (a) the scope of the individual curriculum modules, and (b) the sequence of concepts or topics presented in each module.

The comment most frequently heard from the teachers interviewed was that the modules were broad enough to serve as a resource from which things might be selected, rather than something to be entirely completed. It was also felt that the writing of modules in health, social studies, and science helped to insure that these areas were not neglected. There was some sentiment expressed, however, that the modules were not unified sufficiently and that subject matter, where possible, should be unified (e.g., language arts in social studies). Opinion was mixed as to how consistently the modules were tied to the Knox County goals and objectives.

Although the modules had apparently provided some continuity to the total curriculum and had helped to some extent to prevent overlap, some teachers perceived some lack of continuity, too much repetition and some gaps. The fact that the modules did not have to be followed in order was judged to be a strength, but difficulty was encountered by some teachers in working students back into the curriculum after they were out the Fall Quin.

Objective 3

To describe and assess the procedures used to determine the content (i.e., the development of the concepts or topics presented) of curriculum modules (What resources were used? How was time allocated among concepts? How were learning activities chosen? How were the procedures for evaluation of pupil progress determined?).

Teachers, interviewed concerning the procedures for determining the content of the modules, felt in general that there was not enough time to adequately produce the modules and that selection of the writers was rather poorly handled. It was suggested that the writers should have been screened more. There was repetitive sentiment that some writers of primary modules had had little or no experience with this level, which led to inappropriate suggestions and guidelines in some primary level modules. (One teacher told of revising five such modules to make them fit primary children). Teachers also felt selection of writers was too haphazard - too often, "Who wants to do this?" One writer of a module admitted to having written a module in spite of a desire not to do so. Also, some felt more than one writer should have been engaged to write. It was suggested that specifications for the modules were not always given to the writers, and if given, were not sufficiently followed. Some feeling favoring the engagement of some outside help was also expressed.

Objective 4

To identify the components of the curriculum modules which teachers and administrators perceive as (a) facilitators and/or (b) constraints in implementing curriculum modules in the classroom.

The activities given in the modules were viewed as the biggest facilitator in implementing the curriculum. In addition, teachers sometimes felt that the goals were a help in long range planning and that the listed references and visual aids were helpful (when available). The availability of items listed as related materials and references appeared to be improved during 1975-76 as compared to 1974-75. However, some teachers still felt suggested materials were hard to get; occasionally as long as a month elapsed when materials were ordered from the central office.

Although those interviewed generally found the module activities helpful, some found ideas irrelevant for the target student population or felt a lack in the area of learning center activities. Another perceived lack was in the area of suggested evaluative techniques. Some teachers felt long range goals were too imprecise, while others felt the objectives were too repetitious, which tended to discourage use of the modules.

Objective 5

To describe and assess the extent to which curriculum content is being adapted to accomodate the varying learning styles of individual students.

and

Objective 6

To describe and assess the extent to which curriculum content is being adapted to accomodate the varying academic achievement levels of individual students.

The degree of individualization according to learning style or academic achievement made possible by the modules was perceived differently among the teachers interviewed. Those finding the modules helpful in individualizing instruction cited repeatedly the ideas which were given for large groups and small groups, and the possibility of finding activities suitable for the varying styles and levels of each child. Specifically mentioned were the task cards, the quest activities, and the symbolic designation of some activities as "accelerated" or "slow".

On the other hand, some interviewees found the modules geared more to the average and of little help in meeting the needs of other children. The lack of activities for slow learners was mentioned in particular. It was suggested that some activities designated as "for exceptional" were not very helpful.

Objective 7

To determine the extent to which curriculum module development has proceeded toward completion.

Teachers at the primary level had the modules initially written available to them, although several teachers sometimes had to share. Some had not, however, received many of the revised modules. So apparently some work was yet to be completed on the revised editions of the modules.

Objective 8

To determine the extent to which curriculum modules are presently being used by ESY teachers.

Teachers at the primary level kept their modules close at hand and used them. The most common use was as a resource, often to supplement "themes" or units, or to serve as a foundation from which to creatively develop other instructional techniques. Teachers might pick activities from the modules according to unit and need and also use module objectives to set up goals for the year. The social studies, science, and health modules were the most extensively used, with the P.E. modules used very little, apparently, and the music modules used only a little more, except by the special teachers in these areas. Also, teachers often were responsible for particular subject areas in the open situation and tended to work exclusively with the module of that area. There was no indication that the modules were the curriculum -- they were a major resource.

Objective 9

To describe and assess the system being used to evaluate and revise the curriculum modules.

The revisions of modules involved two or three teachers, which was considered to be an improvement over the use of only one teacher in the beginning. In some cases at least, those doing the revisions were teachers who had used the modules, although the extent of this practice was not as great as it should have been according to some interviewees. All teachers had an opportunity for input in the revision process. Suggestions were elicited in after-school meetings, and through written notes to the principal or the revision committee. This was seen to be a helpful procedure.

There was some feeling that the revisions may have been rushed, as was the initial writing, and that perhaps there still needed to be a stricter compliance with the original module specifications. The one day released time for revising modules was believed not to be enough.

ESY CURRICULUM EVALUATION, 1975-76
Middle Schools

By John R. Ray

The data presented below were compiled from interviews with sixteen selected faculty members at Cedar Bluff Middle School and Farragut Middle School. The single categorization variable used was initial participation in the development of the modules -- high, moderate or low. Various subject areas were presented at each school. The results of the interviews are presented according to objectives for the 1975-76 ESY Curriculum Evaluation.

1. To ascertain the extent to which:

   a. Teachers are familiar with the content of Knox County Schools' Instructional Goals and Objectives.

   b. Teachers and administrators approve of the content of this document after a year of use.

At both Farragut Middle School and Cedar Bluff Middle School each of the participants interviewed indicated they were familiar with the content of the Knox County Schools' Instructional Goals and Objectives for their area. Additionally, all of those interviewed indicated basic approval of the content of the goals and objectives. In one or two instances, however, a staff member raised questions about whether a goal was attainable under the current structure.

2. To describe and assess the procedures used to determine:

   a. The scope of the individual curriculum modules.

   b. The sequence of concepts or topics presented in each module.

The teachers agreed that the involvement of teaching personnel throughout the district had been excellent in the preparation of modules. In a few instances some teachers questioned whether this was the most effective and/or efficient way to develop curriculum materials. This did not concern subject matter coverage, but methodology. A few teachers questioned whether commercially available materials could not have been purchased or contracted for rather than using the procedure chosen. That was, however, not to indicate that they were not happy with the content, were not using the materials, or were not pleased with the opportunity to provide input. In general, the teachers were pleased with the procedure for revision and evaluation, although several indications were given that time constraints for revision were too tight for the best possible results.

3. To describe and assess the procedures used to determine the content of curriculum modules.

In general, the teachers were reasonably pleased with the material that was presented in the modules, with the determination of topics which were chosen for inclusion, and the manner in which they were developed. There was some concern expressed that selected modules needed extensive revision initially, but after the revisions took place, the results were acceptable. The teachers indicated they felt reasonably satisfied with the curriculum content of modules. Many of the teachers indicated that the structure of the modules allowed for the development and use of group activities and alternate programs throughout the district which had not previously been possible in the nine-week program plans. It was in the areas of student activities and performance objectives and goals within the modules that the teachers expressed a uniform respect. They were not always as unanimous in their suggestion that pupil progress was easily determined. It should be noted that not many teachers had better ideas to offer and many were much more pleased with the procedures for evaluation using the module activities than they had been using previous evaluation schemes.

4. To identify the components of the curricular modules which teachers and administrators perceive as

    a. facilitators and/or

    b. constraints in implementing curricular modules in the classroom.

In general, this question did not elicit much response. Basically, the teachers felt that the modules fitted the structure of the quinmester system very well, but no one indicated that much would be lost if the quinmester system were not continued. Fewer modules would be used in a twelve-month cycle but all could be used as regular or elective work. For example, if there were five modules available for use in the quinmester system, only four of those could be regularly taught and the fifth would be used for supplementary and/or optional instruction or independent study on the part of the participating students. No teacher expressed a concern that there were constraining factors within the district structure that held back the proper utilization of the modules.

5. To describe and assess the extent to which curriculum content is being adapted to accommodate the various learning styles of individual students.

The curriculum content of the modules lends itself to group activities. Smaller groups of youngsters could be structured, thus allowing an accommodation for various learning styles of individual students. The structure of the modules themselves, giving performance objectives, classroom activities, reading lists, etc., allowed a wider based curricular content which could be adapted to the various learning styles of individual students. The teachers indicated that the modules still did not provide the capability to totally individualize student activity in the classroom, but that the modules were extremely strong in facilitating their work with small groups as well as introducing entire topic areas. In this respect, the teachers were uniform in their praise of modules.

6. To describe and assess the extent to which curriculum content is being adapted to accommodate the various achievement levels of individual students.

As was mentioned in the answers to the previous questions, the modules were much more adequate in facilitating the teacher's use of instructional strategies involving small groups than in individualization. It should be added that supplementary use of the modules on an individual basis (i.e., as enrichment materials) was noted as a strong motivator for some youngsters.

7. To determine the extent to which the curriculum module development has proceeded towards completion.

It is at this point that the investigator found a major concern among selected teaching groups. This was most evidenced in the area of science. Tracing the development of the science modules, the investigator found that several of the science modules had been developed, revised, and were planned for reintroduction during the school year 1975-76. However, in most instances, revised copies of the restructured modules were not available to the teachers as of mid-January, 1976. As a matter of fact, many of the teachers had not even seen completed, revised modules in their subject areas. Some were planning to use them in the next quinmester and they were simply not available. In some instances, teachers in this particular subject area were using nonrevised modules and were, therefore, at a loss to assess the value of the materials.

8. To determine the extent to which the curriculum modules are presently being used by ESY teachers.

The ESY teachers interviewed in this sample were uniform in their response to this item: they all used the modules. Many, however, hastened to add that there were elements of various modules that they found to be more useful than others. All the teachers interviewed were lavish in their praise that the modules had some utility in almost every instance and they were pleased with the results of the modules.

9. To describe and assess the system being used to evaluate and revise the curriculum modules.

Uniformly the teachers were pleased with the opportunity to provide input and to participate in the revision of modules after the first year. There was not uniform agreement as to how successful the module revision had been; and indeed, there was not uniform agreement that additional revision was necessary in all cases. Some teachers indicated that an extended period of time should be utilized before a major revision effort was undertaken. Others indicated that there were immediate concerns which could be taken care of this year. However, in some areas teachers were hesitant to suggest major changes.

ESY CURRICULUM EVALUATION, 1975-76
Farragut High School

By Robert Howard

Teachers interviewed for this final evaluation were selected on the basis of their involvement in developing the modules, with the larger number being heavily involved in the writing. A 20% stratified, random sample of teachers was used, using two strata. The first was by subject area, and the second by degree of involvement. The following teachers who were interviewed were involved in module writing as illustrated below:

Heavily involved	Moderately involved	Little involved
2 English	1 social studies	1 music
1 math	1 art	1 math
1 social studies	1 vocational	
2 science	1 driver training	

An interview guide was utilized, and open-ended discussion was encouraged at the end of the interview in the event the interviewee wished to include statements which, at the time of the interview, might not appear to fit into the structured part of the discussion. However, nearly all of the respondents' comments were limited to pertinent items in the interview guide. A definite pattern of comments emerged from the respondents interviewed which will be seen in the report that follows. Because of this it was felt that further interviews would be redundant, and that a reasonably definitive assessment could be made. Interviews were limited on an average to fifteen minutes each.

The Goals and Objectives of Knox County Schools

Teachers appeared to be well informed about, and familiar with, the content of the Knox County Schools system-wide goals and objectives. All teachers interviewed emphasized in some detail their understanding of the goals and objectives of the Knox County Schools. Those teachers involved in writing the modules said they included those goals and objectives in all of the modules as they were writing them. Furthermore, there appeared to be a unanimous feeling that the Knox County goals and objectives helped them have a clearer picture of how they were carrying out the goals and objectives in individual classrooms.

Procedures Used to Determine the Scope and Sequence of Individual Modules

Teachers responded to scope and sequence issues in a variety of ways, depending upon the nature of study in each subject area. They felt that the county provided an excellent broad, conceptual framework from which the modules could be taught. Most teachers felt that it was difficult to stay within the modules. This was to be expected since the nature of the content and the progress of the class often times were developmental, particularly in creative situations. Teachers demonstrated a high degree of professional maturity when they indicated that these modules served as resources for teaching rather than regulating teaching. Most teachers never actually completed a module.

These modules gave the teachers a framework to work from in building their courses of study. They gave definition through goals and objectives which the teachers conscientiously tried to follow. Many teachers liked the idea of having a sequence to follow, so that important information would not be excluded from their courses. They liked to teach from the modules' sequence of information.

Procedures Used Relative to the Development of the Curriculum Modules

Many of the modules were written by a teacher who had taught the course before. In these cases, the originator of the modules merely designed his module much as he had taught his course before. In other cases, the modules were the product of several teachers on a county-wide basis. Teachers who had input into the writing of the modules, on the whole, were better satisfied with those modules; however, many said they appreciated the comments and additions to the modules made by their colleagues after having taught them for a year. In some cases modules had been based on a particular textbook, and in this instance, might not be as useful to a teacher in another school if he did not have access to the same materials. There was a general positiveness towards the modules, and this was seen as a reflection of their active involvement in the module development. Some teachers felt that there was not adequate access to certain resources which had been written into the modules. However, these modules, for the most part, had been written with the idea of including various resources, all of which need not be used in any given unit of work.

Learning activities were chosen with the idea that they could be used with various size groups. There were attempts made to vary learning activities with the hope of reaching various learning styles.

The selection of concepts and the amount of time devoted to each concept represented the past experience of the teacher who had taught the course before.

Evaluation contained in the modules was considered to be rather general and was largely left up to the individual teacher. Evaluation was under-stressed in the modules.

The Identification of Components of the Curriculum Modules Which Were Perceived by Teachers to be Facilitative and/or Restrictive

Several teachers mentioned that performance objectives had been particularly helpful. Others indicated lists of activities provided in the modules had been helpful, or had led to the development of further activities. Most of the teachers had used some of the activities, those that could feasibly be used. Some indicated they could not use all the suggestions, but they might be able to use them in the future.

Perhaps the audio-visual and library resources were the least used area in the modules. This was partly because in some instances few resources were available. One teacher mentioned that in order to use county resources, he must take his turn with others in the system, sometimes waiting five weeks for materials. This necessitated long-range planning, which might be difficult for new teachers. Another teacher said some modules were impractical with large classes. Some modules were written with the average student in mind and little material for advanced or poor students.

Learning Styles and Achievement Levels of Individual Students and the Curriculum Content

Approximately half the teachers interviewed indicated that the learning styles of individual students were not accommodated by the curriculum content. This is a difficult problem with all types of teaching situations. The module was no exception. Many teachers felt it was difficult to organize small groups and individualized work because of the class size, lack of books and materials, and the over-all complexity of dealing with the logistics of providing proper stimuli for students.

Appealing to different achievement levels was perhaps the weakest area of the modules. This varied with individual teaching areas. The English modules were written for average and above, or for slower students. Some of the general math modules were written more for average and above rather than for slower students.

It was felt that these modules were very helpful to students who might be misplaced in a class; in these instances the modules were more responsive to student needs. They offered flexibility to the program which was not possible before.

Plans for Revision and Completion of Modules

The modules in each subject area had been utilized to some extent by all the teachers in that area. Teachers felt that more work needed to be done on each module, particularly at the end of a nine week period, so they could be enlarged and changed as use dictated. It was considered extremely important that the new material be fresh in the mind of the module writer in order for effectiveness to be optimized. In this sense, the module would never be considered totally complete, but would constantly involve additional inclusion and exclusion of material as new information and experience were brought to bear on the module.

Utilization of the Modules

Most of the teachers used the modules extensively. The modules were flexible enough so that teachers were able to draw from them in particular situations even if they didn't use them totally. Those who wrote the modules used them the most; however, all the teachers had used the goals and objectives as guidelines for their courses and had adapted other areas in the modules to fit their classes, depending on the availability of materials and time, etc.

It was felt that the activities in the modules often were not helpful and had to be adapted in order to fit them into specific situations. This could be considered an asset, however, since teachers were attempting to fit the modules to the learning styles of students rather than trying to fit the students to the scope and sequence of the modules. The audio-visual and library resources possibly were the least used by some of the teachers interviewed. All of the teachers had copies of their modules where they could have easy access to them, and most teachers referred to them every day.

Evaluation of the Modules

Most teachers agreed that more than one teacher should have collaborated on writing the modules. Some who had written modules suggested that the evaluation of others had been very helpful when they were revised. Some felt that if they had had more time, or if they had had more orientation before writing the modules, they might have been able to improve them on the first writing.

Over half of the teachers interviewed said the modules had been evaluated once at the end of the year. Depending on the department, some had been reevaluated several times. All the teachers felt the modules should be evaluated again by all the teachers teaching the same modules. Several suggested that all should have been included in designing the modules in the first place, as it gave an opportunity to present varying ideas.

Since teachers had had the opportunity to use the modules, they felt the need to sit down together and reevaluate them so that the input of more teachers' ideas could be implemented and included in the modules. Some felt they would like to evaluate these modules at the end of a nine week period when they had just finished teaching them, but indicated there was never enough time to do this.

Summary of General Response

Most ESY teachers were familiar with the content of the Knox County system's *Instructional Goals and Objectives*, at least in their own subject areas. Primary teachers seemed least familiar with the document, perhaps because some of them considered the objectives unrealistic, even inapplicable, at the primary level. There was general agreement at all levels that the objectives represented a step forward in curricular organization for the school system. The faculties seemed to appreciate having some knowledge of system-wide expectations regarding subject area content and student performance. No basic philosophical differences between system goals and individual teachers' goals were detected in the interviews.

Teachers were uniformly pleased to have been given the opportunity to develop the ESY curriculum modules. However, some did question the economics of building an entire new set of curriculum materials, K-12, when other good materials were already available in some areas and might simply have been purchased. Within certain broad guidelines specified by subject area committees, the writer of each module determined the scope of the module and the sequence in which topics were presented within it. Most modules were comprehensive enough to be considered resource units rather than series of daily lesson plans. Module objectives provided guidance for course content which the faculties welcomed, but most teachers supplemented the modules with other materials and methods, and most teachers said they were not able to utilize *all* suggested activities within a given module. Primary teachers expressed the concern that their modules were too discrete -- too subject-specific -- and hoped the revisions could place more emphasis on integration of subjects (e.g., the relationship of language arts concepts to social studies, science, etc.).

The content of the curriculum modules was determined chiefly by the module writers. In some cases, extensive research was conducted and a variety of current methods and materials was utilized in the module. In other cases, especially at the high school level, teachers who had developed what they considered an effective approach to a topic produced modules which emphasized methods and materials they had validated personally. As one would expect, some teachers were able to find fault with both methods of determining content because what works for one teacher or group of students will not necessarily meet the needs of others. Nevertheless, majorities of middle and high school teachers expressed overall satisfaction with module content, especially after revisions were made at the end of the first year of use. Satisfaction with module content appeared to be directly related to the extent of involvement in module preparation. Primary teachers had not written as large a proportion of their own modules as had middle and high school teachers; consequently, they were more critical of the end products. Several primary teachers had difficulty adapting to the needs of primary pupils modules written by individuals who had had little or no experience at that level.

Performance objectives and suggested learning activities, in that order, were seen by faculties at all levels as the most helpful components of the curriculum modules. Evaluation of pupil performance was considered the weakest feature of most modules. Limited access to library and audio-visual resource materials was seen as a major obstacle to full utilization of instructional strategies suggested in the modules.

When asked about the extent to which individual student learning styles were accommodated in the modules, most teachers pointed to the ideas for small group and large group activities which were present in many modules.

The extensive lists of resources in some modules provided options which teachers could use to individualize assignments. Adaptation of curriculum content to varying levels of academic achievement was ineffectively accomplished or absent in most modules, according to the teachers interviewed. Content of most modules was viewed as adequate for the average student, but weak in providing for the needs of slower, or accelerated, students, or both. Teachers were uniformly skeptical about the possibility of individualizing instruction, regardless of provisions in the modules or in other resources, until reductions in class size were accomplished.

At the end of January 1976 less than one-third of the curriculum modules had been revised and duplicated in final form. Modules in social studies and language arts had been given priority, and were closest to completion. Teachers in most other subject areas, especially science, complained about their lack of access to completed modules. Knox County officials had hoped to have approximately half the modules finished by Fall 1975, but the task proved to be much more time-consuming than originally anticipated.

Unquestionably the ESY curriculum modules were considered a major teaching resource by teachers interviewed in December 1975. Most referred to the modules frequently; teachers who wrote modules used them most extensively; but even those who did not use the modules every day had consulted, and been guided by, the sections containing performance objectives.

Just as teachers were pleased to have the opportunity to write the original modules, they also derived satisfaction from their involvement in the revision process. An attempt was made to involve several users of a module, as well as the writer, in the revisions. This procedure was less strictly followed, with resulting criticism, at the primary level. Teachers at all levels felt more time was needed to permit full utilization of users' suggestions; indeed some believed the modules should never be considered complete but should continue to evolve as user experience accumulates.

Addition of Curriculum Materials

During visits to the ESY schools in April 1975 the evaluators had an opportunity to talk with a random sample of teachers about the new curriculum materials. ESY administrators had hoped that the new modules would increase the use of instructional materials other than textbooks. But the teachers interviewed did not feel that such an increase had actually occurred. They perceived no real change since ESY began in the quantity of materials they wanted to use in their classes, but they described a change in the availability of such materials.

One disadvantage of providing -- via the modules -- some standardization of curriculum content was the creation of a situation in which several teachers requested the same set of instructional materials -- as suggested in the modules -- at the same time. Early in the 1974-75 academic year librarians had to establish waiting lists for many materials, and teachers of the same subjects made arrangements among themselves to maximize the distribution of the available materials. By December 1975 when another sample of ESY teachers was interviewed by members of the curriculum evaluation team, these arrangements for sequencing presentation of topics within subject areas to avoid simultaneous demands for materials had alleviated somewhat the problem that emerged during the first year of ESY operation. Nevertheless it must be noted that limited access to resource materials was still viewed as a major obstacle to full utilization of activities suggested in the modules.

Staff Transfers and Turnover

One obvious indication of staff satisfaction with a new program is any significant increase or decrease in resignations or requests for transfer to other situations within the school system. During the first two years of ESY funding (i.e., January 1974 - January 1976) no principal at an ESY school resigned or requested a transfer. Figure II.8 contains a record of the number of teachers who left ESY schools for one reason or another for the three years preceding ESY and for the first operational year of the new program.

FIGURE II.8

NUMBERS OF TEACHERS LEAVING ESY SCHOOLS FOR VARIOUS REASONS DURING 1971 - 75.

	CBP				FP				CBM				FM				FH			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Transferred		2	2		*			1	4	2		1	*	3		2		1	3	
Resigned	9	4	7	7	*	4	4	5	6	7	8	1	*	5	3		11	7	3	
Terminated **												1							2	1
Retired						1	1	1	1					2		2				
Leave of Absence	1		2												1			1		
	10	6	11	[illegible]	*	5	5	7	11	9	8	3	*	10	4	4	11	9	8	1

YEAR 1 = 1971-72
2 = 1972-73
3 = 1973-74
4 = 1974-75

* School not in operation in 1971-72
** Dismissed

During 1972-3, the first year all five schools were open, a total of 39 teachers left the ESY schools, during 1973-4 the figure was 36, and 22 teachers left for one reason or another in 1974-5. This downward trend was probably due primarily to labor market constriction: teachers remained on the job because they knew prospects for employment elsewhere were dim. Requests for transfer to other situations may be more indicative of teacher response to ESY and its attendant changes. Between 1972-73 and 1974-75 requests for transfer fell from a total of 8 at the five schools to 4.

On the basis of teacher turnover information for so few years, firm conclusions about trends, and certainly about the effects of ESY, could not be supported. However, the direction of the data suggests that teacher turnover decreased and requests for transfer dwindled during the time that ESY was being proposed and implemented. It could be said with certainty that ESY had no significant negative effect on staff morale as indicated by turnover figures.

Student Achievement

Achievement Test Scores for Grades 3, 5, and 8

Sources of data. Standardized achievement test scores are valid data for the evaluation of a curriculum innovation when the achievement tests being used provide measures of pupil progress toward meeting the objectives of the new curriculum. For a number of years prior to ESY the Knox County school system routinely administered the Metropolitan Achievement Test each fall to all students in grades 3, 5, and 8.* Use of the Metropolitan battery was continued in the ESY schools even though new curriculum objectives were established when ESY began. Thus a question might be raised concerning the congruence of what was taught via the ESY modules and what was measured via the Metropolitan tests. However, continued use of the Metropolitans at the three grade levels did make year by year comparisons simpler than would have been the case if a new test had been introduced when ESY was initiated. The ESY evaluation, therefore, includes a comparison of achievement test scores on the Metropolitan for grades 3, 5, and 8* for the three years prior to ESY and for the two operational years of the new program, i.e., 1971-72, 1972-73, 1973-74, and 1974-75, 1975-76.

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* In Fall 1975 Grade 7, rather than Grade 8 was tested at some schools.

Since the Knox County testing program did not permit a longitudinal study of the achievement of one class over a period of several years, achievement data had to be compared for different classes of third graders, fifth graders, and eighth graders over the years of interest. Under these circumstances, achievement differences from year to year might simply be a function of differential ability levels among classes in the same grade in subsequent years. Thus Otis Intelligence Test scores were obtained for each class so that comparisons might reveal when a sharp difference in Metropolitan Achievement Test scores was due principally to a sharp difference in I.Q.

Methods of comparing data. Tyler (1965) has pointed out that ..."there is abundant evidence for a consistent dependable relationship between school achievement and intelligence" (p. 108). She cites studies in which correlations of .53 to .80 have been found for random samples of lower-grade students when both achievement and intelligence tests were given during the same school year (p. 111). Since both kinds of tests were given during the same year at the ESY schools, relatively high correlations might be expected in that situation. This circumstance led the evaluators to look at a comparison of percentile Otis I.Q.s with percentile Metropolitan Achievement Test scores for each class.

It was hypothesized that large discrepancies, say, 12 to 15 points or more, between I.Q. and achievement percentile scores were indicative of underachievement. That is, if the percentile I.Q. for a class exceeded the Metropolitan Achievement percentile in a given subject by as much as 12 points, it might be said that the class was not achieving at a level commensurate with its ability in that subject area. Correlations between I.Q. and achievement in reading and English are much higher than those between I.Q. and science, social studies, or mathematics achievement (Tyler, p. 110). Therefore, the I.Q.-achievement comparisons in reading are more meaningful to the present study than are the comparisons in the other subject areas.

Pre- and post-intervention achievement test scores alone would not be relevant for assessing the effects of the ESY intervention because it would be impossible, without a series of scores over time, to tell whether an upturn or a downturn in the series occurred following the intervention. Accordingly, achievement scores for the three school years prior to initiation of ESY were recorded for the present analysis. However, pre- and post-intervention data were insufficient to warrant the use of inferential statistics. Thus three relatively unsophisticated manipulations of the data were used to provide some indication of the effects of the ESY curriculum on student achievement in grades 3, 5, and 8.

First, percentile achievement scores were averaged for the years 1971-72, 1972-3, 1973-4, and 1974-5 and compared with the appropriate 1975-76* achievement scores. Next a short-range effect was checked: 1975-76 scores were compared with the comparable scores for the previous year (1974-75). And finally, the average (for two third grades, two fifth grades and two eighth grades in most cases) difference between percentile Metropolitan test scores and percentile I.Q.s for the first year of testing at all grade levels (1972-73 for reading and math, 1971-72 for science and social studies) was compared with the average achievement - I.Q. difference in 1975-76.

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*Since ESY was initiated in Summer 1974, and students in grades 3, 5, and 8 were tested in the fall (or in the summer as in 1974 and 1975), there could not have been a measurable effect of the new curriculum until testing took place in Summer 1975 and Fall 1975. Thus for purposes of analyzing achievement data, the years 1971-2, 1972-3, 1973-4, and 1974-5 were considered pre-ESY, and 1975-76 post-ESY.

Reading. In Figure II.9 average percentile Metropolitan Achievement Test reading scores for third, fifth, and eighth graders in the years 1971-72 (grades 5 and 8 only), 1972-73, 1973-74, and 1974-75 are compared with Metropolitan reading scores obtained in 1975-76, the first year in which effects of ESY on achievement could be measured. Since different classes were tested each year, the percentile Otis-Lennon I.Q. for the pre- and post- ESY years has been included for purposes of comparison.

FIGURE II.9

COMPARISON OF PERCENTILE READING ACHIEVEMENT AND IQ**
PRE- AND POST- ESY AT THREE GRADE LEVELS

School & Grade	Av. Ach't 1971-74	Ach't 1975	Av. IQ 1971-74	IQ 1975	Ach't Diff. 1971-75	IQ Diff. 1971-75
1 (3rd)	74.3	77.0	76.7	75.0	2.7	-1.7
2 (3rd)	65.0	68.0	68.0	67.0	3.0	-1.0
3 (5th)	55.2	56.0	70.5	69.0	0.8	-1.5
4 (5th)	50.5	52.0	55.2	60.0	1.5	4.8
3 (8th)	55.0	62.0*	61.0	69.0*	7.0	8.0
4 (8th)	50.0	49.0	56.5	55.0	-1.0	-1.5
AVERAGE					2.3	

* 7th grade scores
** See Achievement vs. IQ tables and graphs in Appendix A

All comparisons involving scores for Grade 7, School 3 in 1975-76 must be made with caution because (1) the scores were not, strictly speaking, taken from the same population as eighth grade scores for the previous years, and (2) the scores were significantly higher than most of the other scores being considered. The seventh grade scores were used to provide some continuity for the Grade 8, School 3, data for the pre-ESY years and to provide a point for comparison with seventh grade scores to be obtained in 1976-77.

Data from the last column of Figure II.9 indicate that, with the exception of the problematic data for Grade 8, School 3, *I.Q.* for the grades considered *did not change* significantly over the years of interest. That is, there was essentially no difference in ability for the groups of students tested pre- and post-ESY. Of the differences that were recorded, four of six were slight negative differences, meaning that four of the groups tested in 1975-76 (i.e., post-ESY) possessed slightly lower I.Q.s than their peers tested in the pre-ESY years. Two groups had higher I.Q.s than their peers tested prior to the ESY intervention.

Having established that pre- and post-ESY student groups were not different in terms of their general ability, one can proceed to a more meaningful analysis of the achievement differences which the ESY curriculum may have influenced.

Reading achievement differences recorded in Figure II.9 were small (with the exception of Grade 8, School 3) and positive. The average reading achievement gain that might be partially attributed to ESY was 2.3 percentile points with the extreme score included, 1.4 points without it. The reading gains were smaller for fifth grades than for third grades, and one eighth grade showed a one point decrease.

Between 1974-75 and 1975-76 there was a very small increase (.6 percentile) in reading achievement, but this included slight decreases in three of six grades.

In 1972-73, the first year that Metropolitan reading scores were available for all three grade levels, the average difference between percentile reading scores and percentile I.Q.s was -4.5 (i.e., reading achievement was consistently lower than the general ability measure). In 1975-76 this reading achievement - I.Q. difference was -5.1 (See Figure AP.41 in Appendix A).Although there were overall gains in reading achievement between 1972-73 and 1975-76, I.Q. gains outstripped reading gains by a small margin. However, there are indications that if scores for all grade levels had been available in 1971-72 this would not have been the case, i.e., the reading achievement - I.Q. difference in 1971-72 would have been greater than the -5.1 calculated for 1975-76.

Evidence from three calculations involving Metropolitan reading achievement scores indicates that reading achievement in grades 3, 5, and 8 showed a small, but non-significant, increase following the initiation of the ESY project. While this increase may not be great enough to be called statistically significant, practical significance might be attached to any increase at a time when nationally there is concern about falling achievement scores.

Math. In Figure II.10 average percentile Metropolitan Achievement Test math scores for third, fifth, and eighth graders in the years 1971-72 (grades 5 and 8 only), 1972-73, 1973-74, and 1974-75 are compared with Metropolitan math scores obtained in 1975-76, the first ESY-affected year.

Mathematics achievement declined in four of six groups studied. The average decline for grades 3, 5, and 8 between 1971 and 1975 was very small, however (-1.1 percentile). There appeared to be a real gain (4.7 points) in one third grade group. Losses were greatest at fifth grade level.

FIGURE II.10

COMPARISON OF PERCENTILE MATH ACHIEVEMENT** PRE- AND POST-ESY AT THREE GRADE LEVELS

School & Grade	Av. Ach't 1971-74	Ach't 1975	Difference 1971-75
1 (3rd)	63.3	68.0	4.7
2 (3rd)	56.7	55.0	-1.7
3 (5th)	54.5	49.0	-5.5
4 (5th)	39.8	35.0	-4.8
3 (8th)	42.2	44.0*	1.8
4 (8th)	36.8	36.0	-0.8
AVERAGE			-1.1

* 7th grade score
** See Metropolitan Achievement Test scores in Appendix

Considering the data obtained for the three grades in 1974-75 and in 1975-76, the immediate effect of the ESY intervention on math achievement appeared to have been a positive one. Math achievement for the three grades increased over the first year of ESY operation by an average of 2.3 percentile points. One third grade experienced a dramatic 11-point increase, and altogether there were increases in three of six groups.

The correlation between I.Q. and achievement in mathematics is not as high as that between I.Q. and verbal achievement. Nevertheless, I.Q. and math achievement were compared over the years of interest (see Figure AP.42 in Appendix A). In every comparison percentile I.Q. exceeded percentile math achievement by at least 7 points. In 1972-73 (the first year for which data were available from all four schools) the average math achievement - I.Q. difference was -12.3 percentile points. By 1975-76 this gap had widened to -18.

While mathematics achievement showed a very slight (non-significant) decrease between 1971 and 1975, the impact of this finding was mitigated by two other considerations: (1) nationally a decline in math achievement occurred during the same time period, and (2) a negative trend in math achievement evident in the ESY school data in the years prior to ESY was not accelerated by initiation of the new program; in fact, math scores increased during the first year of ESY in three of six groups investigated.

Science. In Figure II.11 average percentile Metropolitan Achievement Test science scores for fifth and eighth graders in the years 1971-72, 1972-73, 1973-74, and 1974-75 are compared with Metropolitan science scores obtained in 1975-76.

FIGURE II.11

COMPARISON OF PERCENTILE SCIENCE ACHIEVEMENT** SCORES PRE- AND POST-ESY FOR GRADES FIVE AND EIGHT

School & Grade	Av. Ach't 1971-74	Ach't 1975	Difference 1971-75
3 (5th)	63.8	60.0	-3.8
4 (5th)	55.0	53.0	-2.0
3 (8th)	55.5	67.0*	11.5
4 (8th)	54.2	46.0	-8.2
AVERAGE			-0.6

* 7th grade score

** See Metropolitan Achievement Test scores in Appendix A

Science achievement declined in three of four classes investigated during the period 1971-75. Even using the extreme positive difference recorded for Grade 8, School 3 when Grade 7 scores were substituted in 1975-76, the average difference was negative. Without the extreme difference, that average would have been -4.6 percentile points. Between 1974-75 and 1975-76 science achievement scores for the same three groups (i.e., excluding Grade 8, School 3) declined by an average of 2.6 percentile points.

A look at Figure AP.43 in Appendix A creates the impression that science achievement in relation to I.Q. declined steadily from 1971-72 through 1975-76. The ESY intervention did not interrupt that decline. In 1971-72 science achievement - I.Q. differences for grades 5 and 8 averaged -0.8 percentile, but by 1975-76 the difference had widened to -7.0.

Three indicators yielded similar conclusions about science achievement scores at the ESY schools: in accordance with the national trend during the same time frame, science achievement declined between 1971 and 1975. The ESY intervention did not substantially retard that decline.

Social studies. In Figure II.12 average percentile Metropolitan Achievement Test scores in social studies for fifth and eighth graders in the years 1971-72, 1972-73, 1973-74, and 1974-75 are compared with Metropolitan social studies scores obtained in 1975-76.

The decline in social studies achievement scores between 1971 and 1975 was, although small, the most clear-cut trend to be discerned from the achievement data. The decline for two fifth grades and two eighth grades averaged 3 percentile points. Once again the biggest losses occurred at the fifth grade level.

Comparison of 1974-75 social studies scores with 1975-76 scores did not reveal a positive ESY intervention effect: the difference for the four classes considered averaged -1.5 percentile points.

FIGURE II.12

COMPARISON OF PERCENTILE SOCIAL STUDIES ACHIEVEMENT** SCORES
PRE- AND POST-ESY FOR GRADES FIVE AND EIGHT

School & Grade	Av. Ach't 1971-74	Ach't 1975	Difference 1971-75
3 (5th)	61.8	54.0	-7.8
4 (5th)	53.8	49.0	-4.8
3 (8th)	56.0	57.0*	1.0
4 (8th)	50.2	50.0	-0.2
AVERAGE			-3.0

* 7th grade score
** See Metropolitan Achievement Test scores in Appendix A

The widening gap between percentile social studies achievement and I.Q. from 1971 through 1975 is apparent in Figure AP.44 in Appendix A. In 1971-72 Metropolitan social studies scores were lower than I.Q. scores by an average of 3.2 percentile points; in 1975-76 this difference had increased to 10.7 points.

According to the three indicators just discussed, achievement in social studies at the ESY schools continued a gradual, but unmistakable, decline following the first full year of ESY operation.

Achievement among Summer Quin students. Investigation of achievement test data for students who attended the 1974 and 1975 Summer Quinmesters indicated that, with the exception of Grade 8, summer students were underachievers in the four subject areas considered. In 1974, Summer Quin students possessed higher (by an average of 5.3 percentile points) I.Q.s than their "regular" school year classmates, yet their achievement scores at third and fifth grade levels were slightly lower than those of their regular year peers.

In 1975 there was less difference in I.Q (2.7 percentile points, on the average, favoring regular school year students) between those attending the Summer Quin and their classmates attending only throughout the regular year. But achievement scores for Summer students and non-Summer classmates differed more, with the advantage again belonging to the non-Summer contingent. As in 1974 eighth graders' achievement scores were more in line with their measured abilities, and were in some cases higher than achievement scores for classmates attending only the regular year.

It is much more likely that underachieving youngsters elected the Summer Quin with its small classes and individual attention, than that Summer attendance or exposure to the ESY curriculum caused the Summer students to be underachievers.

Failing Grades at FH

When the objectives for ESY were proposed, it was thought that the proportion of failing grades to all grades given at FH could be calculated using data stored by Knox County for retrieval via automated processing. However, Knox County's computer facility was not able to supply this information, so the objective had to be abandoned.

College Aptitude Tests

Mushrooming enrollments at FH during the 1970's made it exceedingly difficult to administer group tests of any kind to an entire class of students. There was no room large enough to accommodate a whole class, and if the tests were given to students in shifts, class schedules would be disrupted for several days, and security would pose a threat to validity of results. Consequently, intelligence and achievement testing programs were curtailed at the high school during the three years prior to ESY. During the Fall 1975 Quinmester juniors at FH were given the Stanford Achievement Test of Academic Skills, but this merely established a baseline as far as the evaluation was concerned. No data from prior tests were available for comparison.

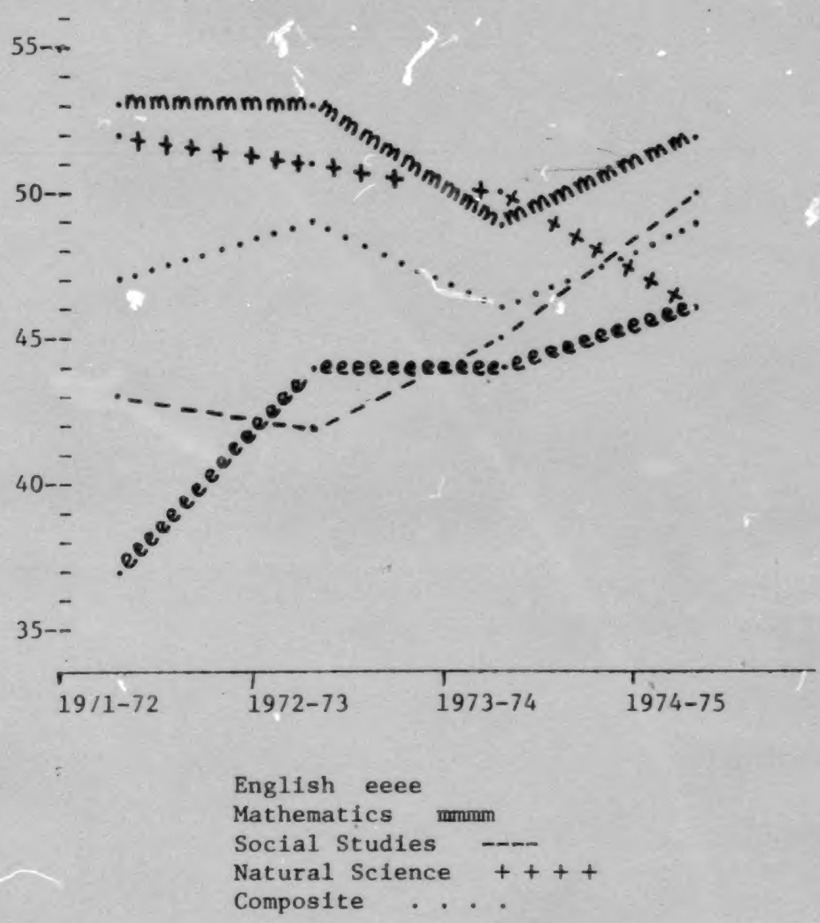
On only one test -- the ACT -- was there a continuous record of scores for comparison over the years of interest: 1971-72, 1972-73, 1973-74, and 1974-75. During those years the groups of Farragut High juniors and seniors who took the test varied very little in grade point average: 2.65 was always a close approximation of the actual GPA. Thus the samples of students who took the ACT each spring from 1972 to 1975 appeared to resemble each other closely in terms of school achievement as measured by FH teachers.

In Figure II.13 the 1971-75 FH ACT scores expressed as percentiles are plotted for the composite and four subscales: English, Mathematics, Social Studies, and Natural Science. Perhaps the most significant conclusion to be drawn from this persentation is that during a period when achievement test scores declined nationally, FH students were defying that trend. The percentile score in English climbed from 37 to 46; the mathematics score was stable, approximately 52 each year; the social studies score rose from 43 in 1971-72 to 50 in 1974-75; and the ACT Composite increased slightly from 47 to 49 during the years being investigated. Only on the Natural Science subscale was there a notable decline: from 52 in 1971-72 to 46 in 1974-75.

The data in Figure II.13 provide only limited evidence of the effect of the ESY calendar and curriculum changes on ACT scores at FH because the 1974-75 scores alone could reflect any influence of the new program. It is obvious from the trend of the graphed achievement data that the overall effect of ESY was certainly not negative. In fact, scores in English, math, and social studies, as well as the composite score, showed an improvement over the previous year's scores. Only the natural science score declined, and the downward trend in this area was evident prior to the inception of ESY.

FIGURE II. 13

PERCENTILE ACT SCORES FOR FH JUNIORS AND SENIORS 1971-75



Parental Approval of Curriculum Effects

As was true for most categories of ESY data, there were no prior measures of parental approval of the effects of school curriculum on their children against which data obtained after ESY began might be compared. Therefore the evaluation plan called for collecting baseline data from parents during the first year of ESY operation for comparison with another sample of parental opinion during the third year of the program. It was anticipated that the extent of approval would increase as the new curriculum became institutionalized and the rough edges apparent in the first year of operation were smoothed.

In March 1975 a questionnaire was provided for each student in third, sixth, and tenth grades to take home to his or her parent. In the cover letter the parent was instructed to return the questionnaire to the evaluator in an enclosed postage-paid envelope, or to send the completed form back to the school with the child. Most questionnaires were returned by mail, but the response rate was quite low. To supplement the data gathered from the parents of students at the three specified grade levels, the PTA presidents agreed to distribute copies of the parent form at their spring PTA meetings. No more than ten parents completed questionnaires at the Cedar Bluff and Farragut Middle-High PTA meetings. At the Farragut Primary association meeting approximately 50 parent forms were completed.

Approximately one-third of the parent questionnaires sent home with students were returned. A total of 505 parent forms was processed, including the forms completed at PTA meetings. The total was comprised of 65 forms from Farragut High parents, 118 from parents of students at Cedar Bluff Middle, 70 from Farragut Middle parents, 129 from Cedar Bluff Primary parents, and 121 from Farragut Primary parents. At Farragut High 28 percent of the parents responding had children who had attended the 1974 Summer Quinmester. At the other four schools approximately 15 percent of the respondents were parents of Summer Quin students.

The low parent response rate renders conclusions based on the data suspect. But parents of children at all levels -- primary, middle and secondary -- reported opinions that were quite similar. Also, on 12 of 21 questionnaire items the percentage of positive responses for the most negative segment of the sample was within 10 points of the percentage for the most favorable group. The extreme groups differed by as much as 20 percentage points on only one item. It seems more likely that respondents at each level did represent rather accurately the thinking of the whole group of parents than that, coincidentally, persons holding very similar points of view elected to submit questionnaires at all three levels. Support for the latter alternative is further weakened by the fact that the respondents, whose opinions were similar, did not express predominantly positive or negative attitudes on all questionnaire items. Instead, the percentage of favorable replies fluctuated sharply from one category of items to another.

The "Parent Reaction to ESY" form included general items concerning concepts associated with year-round school, as well as more specific items concerning the ESY curriculum. The general items are discussed later, in the "Parents" sub-section of "Attitudes Toward ESY". Attention is given in the following paragraphs to the items related to the new curriculum.

About half of the parents felt that they understood "how the new ESY curriculum (lesson plans and learning activities)" was working in their children's schools. Parents of primary and middle school students who had attended the 1974 Summer Quin felt they understood ESY best (favorable response levels of 71 and 61 percent, respectively).

Parents reflected a lack of consensus about the worth of the new curriculum as compared with the curriculum used in the schools in past years. Roughly one-third said the new curriculum was better than the old, one-third were undecided, one-third said the new curriculum was no better than the old. The only group in which a majority was convinced that the new curriculum constituted an improvement was that made up of parents of Summer Quin students at Farragut High (61 percent said the new curriculum was better). At the other extreme, only 21 percent of the parents at Cedar Bluff Primary felt the new curriculum was better than the old.

All parents were asked to indicate in nine different areas whether the new ESY curriculum had produced an improvement, no change, or a decline when compared with the curriculum used in previous years in the ESY schools. The areas identified included quality of education; quantity of learning taking place; achievement in basic skills: reading, writing, arithmetic; interest in school; child's sense of achievement with regard to school work; career education; general behavior of students; individualization of instruction; and opportunities to use books, tapes, records, films, and other study materials. In all nine areas a majority of parents expressed the opinion that there had been no change. Approximately one-fourth of the parents believed ESY had produced an improvement in the areas identified.

Half of the parents expressed the opinion that their children were "sufficiently aware of the progress" they were making toward achieving curriculum objectives. Only 40 percent of the middle school parents (no difference between the two middle schools) felt their children were sufficiently aware of their progress toward meeting curriculum objectives. Most positive about this matter were primary and secondary parents of Summer Quin students (approval levels of 68 and 71 percent, respectively).

Only about 30 percent of the parents responding felt they "should have had more opportunity during the initial stages of the program to participate in formulating objectives and content for the ESY curriculum." Slightly less than half of the parents said 'Yes' to the question "Do you feel that parents should be involved now in the process of revising curriculum modules?" Apparently the parents were more interested in providing input for this later stage of development than they were in helping with the original plans.

About 35 percent of all parents said the teachers with whom they had talked seemed to like ESY. More than half the parents were undecided about teacher opinion. Less than ten percent felt the teachers were negative, however.

Parents of high school students were asked "Do you consider the opportunity your child now has to seek employment at a time other than summer to be one of the biggest advantages of ESY?" Only 30 percent of the parents said 'Yes'.

Parents who sent their offspring to school during the 1974 Summer Quinmester had more positive feelings about ESY and the accompanying curriculum changes than did parents whose children attended only the regular school year. Parents of secondary and primary school students expressed more positive opinions about ESY than did parents of middle school students.

Less than 20 percent of all parents said that they had "the impression that students who attended the Summer 1974 Quinmester have had problems fitting into classes during the regular school year." Parents of students who had actually attended the Summer Quin were less positive, however. At the primary level 42 percent of these parents said there had been problems; at the secondary level the figure was 39 percent; at the middle school level 29 percent.

Two thirds of the parents who submitted questionnaires wrote "none" or elected not to respond at all when asked "Has your child experienced any PROBLEMS as a result of the ESY Program?"

In the primary and middle schools the lack of articulation between the 1974 Summer Quinmester and the next quin attended drew the most fire from parents of children who started the school year in the summer. Scheduling problems were the subject of most complaints from parents of high school students who attended the Summer Quin.

Students who chose the Fall Quinmester as their vacation quin apparently had the most trouble. Several parents commented, "When my child returned to school for the third quin he (she) was treated as an absentee. It was as if he (she) had not attended school in the summer at all." Parents of primary children voiced concern about social adjustment problems. During the fall friendship patterns were established that did not include Summer Quin students, and they felt left out for a week or more. Lack of neighborhood playmates during the child's vacation quin was a drawback mentioned by several parents of primary Summer Quin students.

Several parents of Summer Quin students in the middle school said that the students' summer achievement records could not be located, so they were forced to repeat work they had done previously when they returned for the third quinmester. Other parents said, "In some subjects my child had to make up nine weeks of work when he (she) came back at the end of the Fall Quinmester."

Parents of Farragut High students who started school in the summer expressed the opinion that problems encountered in scheduling courses during the regular school year had led some of the Summer Quin students to feel penalized. Scheduling problems are treated in a later part of this report, Part D. "Student Scheduling."

Almost without exception, the problems mentioned by parents of students attending school only during the regular school year were difficulties attributable to use of the open space plan or to specific teaching methods rather than to the year-round program or the ESY curriculum.

In summary, responses of primary, middle, and secondary school parents to the questions about ESY submitted to them in March 1975 indicated that majorities of parents at each level were unconvinced that the program's promise had been fulfilled in its first year of operation. Only a third of the parents responding felt that the new curriculum represented an improvement over the curriculum used in the schools in past years. And more than a third of the parents of students who had attended the 1974 Summer Quinmester said their child had experienced problems during the regular academic year as a result of their attendance in the summer. Lack of articulation between the Summer Quin and the other quinmesters created most of the difficulties for students, i.e., scheduling problems at FH, and the necessity of repeating work or catching up in some subjects at the primary and middle schools.

C. INSTRUCTIONAL PROGRAM EVALUATION

The process of developing the new curriculum associated with ESY involved writing instructional objectives for each subject area, then developing strategies within the nine-week curriculum packages or modules that would promote student achievement of the objectives. One effect of this process was an increase in standardization of expectations with regard to what teachers would teach and what students would learn. ESY administrators hoped that this standardization would permit principals to monitor teacher and student performances more readily than had been possible prior to institution of the ESY project.

During April 1975 visits to the ESY schools, principals were asked if they perceived the new instructional program as easier to evaluate than previous programs. The principals were unanimous in their opinion that full inplementation of the ESY curriculum would make it easier than it had been to evaluate the instructional programs in their schools.

The county-wide goals and objectives, and the more specific objectives in the curriculum modules, gave ESY principals 1) guidance concerning the activities being carried out in individual subject areas during the year and 2) criteria against which to measure student achievement in each subject.

D. STUDENT SCHEDULING

Constructing a class schedule for the school year is a crucial activity for high school students. If the process goes smoothly and most students are able to take the courses they want at times they perceive as optimum or convenient, there is a good chance that the school term will begin with student morale at a high level. On the other hand, if many scheduling problems arise, seeds of dissatisfaction are sown that may grow into significant morale problems later.

In March 1975 an instrument entitled "Reaction to ESY at Farragut High School" was completed by 78 percent of the sophomores and 60 percent of the seniors enrolled at FH at that time. The ESY project had been in operation for the better part of a year, so students had had an opportunity to arrange class schedules for three (or four if they attended the Summer Quinmester) quinmesters.

Since all responses to items about scheduling must have been influenced by this factor, it should be noted that only one-fourth of the FH respondents (28% of the sophomores and 18% of the seniors) felt the school offered all the courses they wanted to take in high school.

When asked the question, "Considering the courses that are available at FH, have you been able to work out a schedule for 1974-75 that allowed you to take every course you really wanted to take?" 48 percent (53% of the sophomores and 37% of the seniors) responded affirmatively. Apparently a majority of FH students were dissatisfied with their class schedules.

Sixty percent of the sophomores who attended the 1974 Summer Quinmester said 'Yes' to the item "Have students who attended the 1974 Summer Quinmester had any special problems scheduling the classes they needed during the other quinmesters?" When asked to "describe these problems" 40 percent wrote a response, and most said they had had trouble scheduling classes in algebra, English, biology and health.

Several of the Summer '74 sophomores mentioned that the particular quinmester of a course they needed was not offered when they returned from vacation. Those who chose the fall for their vacation quin seemed to have suffered most. These students said they were notified of the need to schedule Winter Quin classes after many of those classes had already been filled by students present during the Fall Quinmester.

Two summer students complained about being treated as "new students" when they returned after a fall vacation. One said that work done during the summer had to be repeated during the third quin; the other said that teachers resumed their courses at the beginning of the third quin as if there had been no break between second and third quins; thus summer students returning to school felt left out.

Three students reported that they had had to skip lunch in order to schedule classes they needed. Others said they were forced to take study halls beacuse they couldn't get the classes they wanted.

Two of the Summer '74 sophomores mentioned that they had had trouble scheduling the "matches" for courses taken in the summer that required a companion quinmester course for credit to be awarded.

Forty-four percent of the FH seniors who attended the 1974 Summer Quin said they had had scheduling problems during the regular school year. English and algebra were most frequently mentioned as the courses involved in scheduling difficulties. Three Summer '74 seniors said they were behind, and thus penalized, in some courses when they returned from their vacation quin. Another mentioned having to do without lunch due to scheduling conflicts.

Parents who responded to a questionnaire sent home with FH sophomores in March 1975 confirmed the opinions of their offspring about scheduling difficulties. Some parents of sophomores who started the year with the Summer Quin expressed the opinion that scheduling problems had made their children feel "punished" for attending the Summer Quin. After a fall vacation some of the summer students returned to find that those students attending school in the fall had already scheduled their classes for the third quin. Some courses were no longer available, thus some of the summer students had to carry less than a full load of academic work. One parent noted that his child had been obliged to schedule a class during his lunch period.

When FH students at all grade levels were questioned about ESY near the end of the 1975 Summer Quin, scheduling problems were still high on the list of complaints about the new program. Students attending the second summer session were especially dissatisfied with the number and variety of courses offered during that quinmester.

E. ADMINISTRATIVE STRUCTURE AND PROFESSIONAL DEVELOPMENT

By John T. Lovell

Introduction

The purpose of this paper is to provide a report on the effort to continue to describe and evaluate the staff development program and the administrative structure that was utilized in the Extended School Year program of the Knox County School System. The findings for this years's (1975-76) study will be presented within the context of last year's report.

Any time an attempt is made to describe and evaluate anything it is necessary to proceed from a theoretical frame of reference. Such a framework gives direction to the collection and interpretation of data and the evaluation of findings. The description and evaluation of the program was based on the following considerations:

1. Changes in curriculum, instructional programs, and schedules have important implications for the continuing program of orientation and professional development of the staff as well as the administrative structure of the educational organization.
2. Teachers, supervisors, and administrators have human needs, and therefore, have needs for security, belonging, affection, recognition, and job satisfaction.
3. During periods of change in either the curriculum or the organizational structure of a school system, the needs of personnel are intensified and more difficult to meet.
4. Curriculum changes often call for personnel to develop new understandings, attitudes, conceptual skills, technical skills, and human skills.
5. Changes in the organizational structure often require personnel to develop new understandings, attitudes, conceptual skills, technical skills, and human skills.
6. It is the responsibility of the educational organization to help organizational members to develop the new skills that they need.

7. Teachers, supervisors, and administrators have worth and dignity and should be treated with respect.

8. Teachers, supervisors, and administrators have a right to participate in organizational decisions which affect them.

9. Teachers, supervisors, and administrators will respond candidly to questions about curriculum and organizational changes when the response is anonymous and they are assured that only persons on the survey team will see how an individual responds.

The findings of this report are based on data collected from interviews with almost all of the administrators and supervisors that work in the Farragut cluster of schools. Interviews were also held with most of the administrators from the central office of the Knox County Schools. The persons involved in the interviews were most cooperative, and provided various documents about the ESY program.

Staff Orientation and Development

The program of staff orientation and development is assumed to be the provision of engagement opportunities for teachers and administrators that will help develop attitudes, understandings, technical skills, and human skills that will improve their effectiveness as participants in the ESY program.

Administrators and Supervisors

In general administrators and supervisors had a positive feeling about their orientation and professional development program for ESY. There was agreement that the "lead time" to get ready for the program was inadequate, but there was also the feeling that the program was excellent within the time frame.

Most of the administrators and supervisors indicated that the program of professional development had lost some momentum during the last few months that had been gained during the first year of the program. They had not experienced as much interaction with central office personnel, and they did not feel the strong press for action that they had felt earlier. However, it is important that all of the principals and supervisors indicated that they felt competent to do the job required to implement the ESY program. This means that most felt that they had the attitudes, understandings, technical skills and human skills that they needed in order to give leadership to the program. One principal indicated that he could have used more help on getting ready to help teachers understand and implement the curriculum materials.

The development of the curriculum materials was one of the most significant parts of the professional development program for instructional leadership personnel. This was especially true during the effort to evaluate and revise the materials and the effort to implement the materials. Principals, supervisors, and teachers worked together on these jobs, and it not only resulted in significant improvement of the materials but also in professional improvement of the personnel involved in the process.

Teachers

According to the administrators and supervisors the program of orientation and professional development for teachers had improved. The evaluation, revision, and development of curriculum materials was a significant factor. Teachers played a significant role in this process, and there appears to have been an improvement in their understanding, performance and acceptance of the ESY program.

During the months before the first quinmester was operationalized, an effort was made at both the county level and local school level to provide a program of orientation and professional development for teachers. When the program began, the program of professional development for teachers was generally left to the local schools. This does not mean that the central office staff was not supportive. They were. They provided money, materials and supportive staff, but left the design and implementation of the program to local school administrators.

Local school administrators had a positive attitude about the inservice program for teachers. They felt that teachers had had an adequate opportunity to develop the knowledge, attitudes, and skills they needed to implement the ESY program and were, in fact, doing an outstanding job in the program.

Organizational Structure

For the purposes of this study, organizational structure included consideration of the following factors:

1. Teacher , supervisor, and administrator role changes as a result of ESY
2. Authority structure
3. Decision-making processes
4. Communication in the organization
5. Technical and psychological support for professional staff
6. Staff satisfaction

Organizational Roles

Administrators and supervisors who were involved in the ESY program felt that they had a clear understanding of their role in the program. They perceived that they were competent to do the job, and that they had the required authority.

Results of the first survey indicated that administrators and supervisors felt that participation in ESY had changed their jobs in significant ways. In some cases administrative adaptations had been made that helped the situation. In other cases the difference had been made up with extra work.

But, many administrators and supervisors indicated that the new responsibilities were interfering with other responsibilities. Results of the latest survey indicate that this changed during the second year. They began to feel that things they were doing were a critical part of their job and not something "added on." Thus they did not feel any conflict or role frustration about what they should do or not do.

Staff Satisfaction

The results of the first survey showed that administrators and supervisors felt a sense of satisfaction from their participation in ESY. They still felt this way in the second year, and indeed the level of satisfaction grew stronger. They also indicated that their fellow administrators and teachers recognized their contributions to ESY.

Decision Making and Communication for ESY

The results of the first survey indicated that administrators felt that they had an opportunity for direct input in decision-making and policy formulation for ESY. The latest survey results still support this finding. However, it is interesting that as a result of a remark of the Superintendent in June 1975 many administrators and supervisors felt that the ESY program would be terminated at the end of the 1975-76 school year even though no official decision has been made at that point. A feeling was expressed by many administrators that they had had no input on the Superintendent's decision to make this "comment." But some administrators said that they had been involved in the process and understood the basis for the statement.

It is a matter of crucial importance that most of the administrators and supervisors interviewed expressed a positive feeling about ESY. They said the program had improved the school system and should be continued if possible. Concern was expressed about the lack of student participation in the Summer quinmester. Some of the reasons for this lack of participation were shared as follows:

1. Ineffective communication with parents which resulted in parents not understanding the benefits of the program.
2. Failed to keep concept of ESY alive after the program got underway.
3. Students did not like being alone in their neighborhoods.
4. Church activities and other camping activities occur in the Summer.
5. Parents did not want their children left at home alone.

There was also concern expressed about the cost of teaching staffs and transportation for the Summer quinmester. Attendance during the Summer had not been large enough to reduce costs during the other quinmesters. Many administrators did not see how the Summer quinmester could be held in the Farragut area during Summer 1976 since some of the schools would be moving to new quarters.

It is most interesting that most administrators and supervisors, in spite of the problems and hard work, felt an effort should be made to continue the program if it could be made economically feasible.

Summary, Conclusions, and Recommendations

1. The program of orientation and development from the central office for administrators and supervisors slowed down during the second ESY year. However, they were heavily involved in new program development, implementation, and evaluation. They were also heavily involved in planning and implementing in-service education for teachers at the local school level.

It is recommended that the program of professional development for administrators and supervisors be continued and extended with more emphasis on the following:

A. Greater interaction between local schools and Central office on problems associated with ESY. Problems such as poor attendance for the Summer quinmester, and curriculum revision, should receive intensive consideration.

B. Greater interaction among schools so that ideas can be shared.

2. There has been an effort to involve teachers in the development, implementation, and evaluation of curriculum materials. According to administrators and supervisors, teachers experienced heavy involvement in ESY and were heavily committed to the program.

It is recommended that the program of professional development for teachers continue to emphasize problems associated with ESY. Teachers need to be involved not only in consideration of curriculum development, implementation, and evaluation, but also in a consideration of the low attendance at the Summer quinmester and what could be done about it.

3. It is recommended that administrators, supervisors, teachers, and parents should get involved in the discussion on the future of ESY.

F. Cost Analysis

George W. Harris and O.K. O'Fallon

Introduction and Limitations

This report is limited to cost comparisons identified with the first operational year (1974-75) of the Knox County Extended School Year Program. It is further limited by the fact that base data for comparison use was limited to two years: 1972-73 and 1973-74. Data for 1971-72 was found to be contaminated by partial allocation of expenses and resources to Farragut Primary School which opened at mid-year. The findings reported here speak by implication to all objectives of the total evaluation of the ESY program. However, discussion of the findings and the conclusions which are based on specific data relating to costs will relate to the original Knox County objective which is stated as follows: "To determine relative costs of this program versus a traditional program." It is reasonable that the focus on cost analysis has implications for cost effectiveness and related to accounting and maintenance as included in Objective 6 (see page 30).

The analysis used the following data: length of the school year in days; length of the school day by type of school -- primary, middle and high; number of students, unit costs by budget category and combined line items as identified in school system budgets by school, Farragut Area and The Knox County School System. These data were supplied by the Knox County Schools Central Office on form instruments supplied by the evaluators.

The computer program used to analyze the data required that line items from budgets be combined into two broad areas which were designated as direct costs and indirect costs. By definition, direct costs include those monies budgeted for and spent in a specific school, and indirect costs include expenditures budgeted for and spent system-wide. Indirect costs were identified for a specific school by prorating according to the number of contact hours per year for a given school in relation to the number of contact hours for the Knox County School System. Contact hours per year are defined as follows: number of school days in the school year multiplied by the length of the school day in hours multiplied by the number of pupils in average daily membership.

Descriptions and Definitions

Six categories of direct costs and ten categories of indirect costs were used to report the data. Direct cost categories and the budget items included under each one are as follows:

Salaries - teachers, principal, clerks in principal's office and teachers' aides.

Heat, Light, Power - electric light and power plus heat for building.

Telephone and Telegraph - costs of telephone and telegraph service.

Custodial Services and Supplies - custodial services and custodial supplies.

Maintenance of Buildings - Maintenance of building and supplies for the maintenance of plant.

Indirect cost categories and the budget items included under each are as follows:

Central Administration - total expenses for administration such as board of education, superintendent of schools salary, county trustee's commission, etc.

Instruction - costs of instruction other than those included under direct costs. These consist of costs identified with consultants or supervisors, substitute teachers, psychological personnel, instructional clerks to consultants or supervisors, other salaries for instruction, travel expenses for system-wide teachers, travel expenses for home-bound teachers, travel expenses for vocational teachers, travel expenses for other instructional personnel, consultant fees and in-service, other contracted services, teaching supplies, other supplies for instruction, textbooks purchased, binding and repair of textbooks, school library books, periodicals and newspapers, audio-visual materials, other school library expenses, other materials for instruction, miscellaneous instructional expenses, materials clerk salary and other clerical assistants salaries.

Capital Outlay and Clearing Accounts - remodeling of buildings, renovation of buildings, regular instructional equipment, equipment for attendance and health services, professional services for equipment, other equipment, amounts paid into sinking funds for bonds and interest and total clearing accounts.

Attendance and Health - total expenditures for attendance services and total expenditures for health services.

Operation of Plant - excluded are costs included in direct costs but included are other salaries for plant operation, other contracted services for plant operation, supplies for operation of vehicles and repair of equipment.

Maintenance - costs not considered a part of direct costs and including materials and repair parts for plant maintenance, replacement of instructional equipment, replacement of non-instructional equipment, other expenses for plant maintenance, salaries for upkeep of grounds, salaries for repair of buildings and salaries for plant supervisor.

Fixed Charges - total fixed charges including contributions to Social Security System, contributions to State Retirement Fund, insurance on buildings, liability insurance, workman's compensation insurance, boiler insurance, premiums on fidelity bonds, etc.

Food Services - total expenditures for food services including salaries, travel, hauling, contracted services and preparation equipment.

Transportation - total expenditures for pupil transportation including contracts and miscellaneous expenses.

Buildings and Sites - included under direct costs.

Two additional explanations are important to understand the study:

(1) the school day used as part of unit cost varies with school level.

Primary schools are scheduled with six-hour days, middle schools are maintained with six and one-half hour days, while the high school operates on a seven-hour day and (2) the inflation factor used to adjust to cost due to program is a two-year average covering the months of July 1973 through June 1975 and is 10.8 percent. It was calculated by and provided through the Center for Business and Economic Research, University of Tennessee, Knoxville.

Cost Comparisons

The analysis and discussion of the data displayed in Figures II.14 through II.18 centers around average unit costs for the two-year period 1972-73 and 1973-74 compared to the unit costs for 1974-75, which is the first operational year for the Extended School Year Program in Knox County, Farragut area. The comparisons are expressed as percents and are corrected in the last column of each table for inflation. The summary Figure II.19 will be analyzed in terms of total charge by school as shown in the last column which has been adjusted for inflation and should give cost inference for the Farragut area. Emphasis in analysis will be cost charges beyond those identified with inflation and which can reasonably be attributed to new program requirements.

Farragut High School

Farragut High School is the only secondary school in the area. It operates in an "old" building which had to be air-conditioned to accommodate the summer portion of the quinmester schedule. Figure II.14 gives a breakdown of costs into categories and sub-categories identified with direct and indirect costs.

Direct costs as shown in Figure II.14 are those costs specifically defined for Farragut High School. Unit costs for maintenance increased

FIGURE II.14

COST COMPARISON 1972-73, 1973-74 AVERAGE TO OPERATIONAL 1974-75

Extended School Year Project, Knox County - Farragut Area

Farragut High School

School	Cost Definitions	Two-Yr. Average No. Of Students	Two-Yr. Average Contact Hrs/Yr.	Two-Yr. Average Total Costs	Two-Yr. Average Unit Cost	1974-75 No. Students	1974-75 Contact Hrs.	1974-75 Total Costs	1974-75 Unit Cost	Percent 1974-75 is of 2 yr. Av.	Adjusted for* Inflation
Farragut High School	Direct Costs	1,296	1,610,910			1,439	1,803,067				
	Salaries - Tchrs., Principals, Clerks and Aides			$508,684	$ .316			$716,924	$ .398	126	115
	Heat, Light & Power			14,955	.009			22,569	.013	144	[illegible]
	Telephone & Telegraph			1,708	.001			1,766	.001	100	89
	Custodial Services & Supplies			23,176	.014			32,130	.018	129	118
	Buildings and Sites			21,385	.013			21,385	.012	92	[illegible]
	Maintenance of Buildings			2,444	.002			43,218	.024	[illegible]	[illegible]
	Total Direct Costs			572,352	.355			837,891	.465	131	120
	Indirect Costs										
	Central Administration			21,304	.013			25,215	.014	108	97
	Instruction			85,881	.053			120,539	.067	126	115
	Capital Outlay & Clearing Accts.			70,672	.044			67,724	.049	111	100
	Attendance & Health Services			2,796	.002			2,924	.002	100	89
	Operation of Plant			3,828	.002			3,104	.002	100	89
	Maintenance			12,458	.008			30,878	.017	213	[illegible]
	Fixed Charges			6,670	.004			23,331	.013	325	314
	Food Services			6,633	.004			9,969	.006	150	139
	Transportation			66,881	.042			90,525	.050	119	106
	Building & Sites			-0-	-0-			-0-	-0-	-0-	-0-
	Total Indirect Costs			277,041	.172			394,229	.219	127	116
	Final Total Costs			$ 49,366	.527			1,232,120	.683	130	119

* Inflation factor of 10.8 percent for two-year period July 1973 through June 1975 was provided by Center of Business and Economic Research, University of Tennessee, Knoxville. As used in last column it was rounded to 11 percent.

from two mills per unit to 2.4 cents which is 1189 percent of the two-year average. However, this increase should not be misinterpreted because it relates to a small part of total costs and identifies with air conditioning. Important cost increases identify with salaries, heat, light and power, and custodial supplies. It is interesting to note that costs for telephone and telegraph and buildings and sites were held relatively constant when compared to the two-year average, and when corrected for inflation, appear in the table as decreases. The total direct costs, when adjusted, are only 120 percent of the two-year average. This increase reflects program costs for five quinmesters while the two-year average identifies with the standard school year plus limited summer school.

Indirect costs, which are prorated from school system costs show increases in indirect costs of instruction, indirect costs of maintenance, fixed charges, food services, transportation and building and sites. There were little if any cost increases related to central administration, capital outlay and clearing accounts, attendance and health services and operation of plant. It is fair to assume that these were cost areas within which the limits were set through the budget.

The increase in total costs was found to be 19 percent when adjusted for inflation. If Farragut High School served its share of the 13 percent of the students enrolled in the summer quinmester the cost increase is understandable.

Farragut Middle School

Farragut Middle School is represented in Figure II.15. This table indicates both direct and indirect costs during the two-year average (school years 1972-73 and 1973-74) and the 1974-75 school year which was the first year of operation of the five quinmester plan. Areas in direct costs which

FIGURE II.15

COST COMPARISON 1972-73, 1973-74 AVERAGE TO OPERATIONAL 1974-75

Extended School Year Project, Knox County - Farragut Area

Farragut Middle School

School	Cost Definitions	Two-Yr. Average No. Of Students	Two-Yr. Average Contact Hrs/Yr.	Two-Yr Average Total Costs	Two Yr. Average Unit Cost	1974-75 No. Students	1974-75 Contact Hrs.	1974-75 Total Costs	1974-75 Unit Cost	Percent 1974-75 is of 2 yr. Av.	Adjusted for *Inflation
Farragut Middle School	Direct Costs	895	1,032,366			999	1,162,3[illegible]6				
	Salaries - Tchrs., Principals, Clerks and Aides			$271,671	$ .263			$344,264	$ .296	113	102
	Heat, Light & Power			15,258	.015			23,863	.021	140	129
	Telephone & Telegraph			711	.001			817	.001	100	89
	Custodial Services & Supplies			17,317	.017			33,808	.029	171	160
	Buildings and Sites			12,522	.012			12,522	.011	92	81
	Maintenance of Buildings			1,017	.001			8,015	.007	700	689
	Total Direct Costs			318,496	.309			423,309	.364	117	106
	Indirect Costs										
	Central Administration			13,663	.013			16,254	.014	107	96
	Instruction			55,012	.053			77,704	.067	126	115
	Capital Outlay & Clearing Accts.			45,296	.044			56,550	.049	111	100
	Attendance & Health Services			1,789	.002			1,885	.002	100	89
	Operation of Plant			2,458	.002			2,001	.002	100	89
	Maintenance			8,046	.008			19,905	.017	212	201
	Fixed Charges			4,172	.004			15,039	.013	325	314
	Food Services			4,252	.004			6,439	.006	150	139
	Transportation			42,841	.041			58,356	.050	122	111
	Building & Sites			-0-	-0-			-0-	-0-	-0-	-0-
	Total Indirect Costs			177,532	.171			254,137	.219	128	117
	Final Total Costs			496,028	.480			667,446	.583	122	111

* Inflation factor of 10.8 percent for two-year period July 1973 through June 1975 was provided by Center of Business and Economic Research, University of Tennessee, Knoxville. As used in last column it was rounded to 11 percent.

show a percentage increase in cost beyond the 11 percent inflation rate are:

1. Salaries
2. Heat, Light & Power
3. Custodial services
4. Maintenance of Buildings

In regard to the 689 percent increase in the category of Maintenance of Buildings, it must be noted that this large figure represents the additional costs of the installation of air conditioning units. The costs of installation of these units were combined with the normal building maintenance costs.

The total direct costs for Farragut Middle School showed only a 6 percent increase (minus the inflation factor of 11 percent).

Indirect costs for Farragut Middle School which indicated a rise beyond 100 percent when corrected for inflation were:

1. Instruction
2. Maintenance
3. Fixed Charges
4. Food services
5. Transportation

Farragut Middle School's total indirect costs show a 17 percent increase rate (minus the 11 percent inflation factor) during the three-year period involved. Final total costs (both direct and indirect cost) indicate an increase of 11 percent from the combined years of non-operation of the Extended School Year and the first year of operation.

Farragut Primary School

Farragut Primary School is one of two K-3 schools in the ESY Farragut area. The building is new and air-conditioned. Figure II.16 shows the breakdown of costs into categories and sub-categories embracing direct and indirect costs.

FIGURE II.16

COST COMPARISON 1972-73, 1973-74 AVERAGE TO OPERATIONAL 1974-75

Extended School Year Project, Knox County - Farragut Area

Farragut Primary School

School	Cost Definitions	Two-Yr. Average No. Of Students	Two-Yr. Average Contact Hrs/Yr.	Two-Yr. Average Total Costs	Two-Yr. Average Unit Cost	1974-75 No. Students	1974-75 Contract Hrs.	1974-75 Total Costs	1974-75 Unit Cost	Percent 1974-75 is of 2 yr. Av.	Adjusted for* Inflation
Farragut Primary School	Indirect Costs	572	609,738			753	808,722				
	Salaries - Tchrs., Principals, Clerks and Aides			$173,249	$ .284			$269,851	$ .334	118	107
	Heat, Light & Power			13,069	.021			15,346	.019	91	80
	Telephone & Telegraph			721	.001			788	.001	100	69
	Custodial Services & Supplies			14,818	.024			18,920	.023	96	85
	Buildings and Sites			127,015	.208			127,015	.157	76	65
	Maintenance of Buildings			535	.001			4,866	.006	600	585
	Total Direct Costs			329,408	.540			436,788	.540	100	69
	Indirect Costs										
	Central Administration			8,018	.013			11,309	.014	108	97
	Instruction			32,626	.054			54,065	.067	124	113
	Capital Outlay & Clearing Accts.			26,722	.044			39,346	.049	111	100
	Attendance & Health Services			1,071	.002			1,312	.002	100	59
	Operation of Plant			1,425	.002			1,392	.002	100	69
	Maintenance			4,726	.008			13,850	.017	213	[illegible]
	Fixed Charges			2,323	.004			10,464	.013	325	314
	Food Services			2,503	.004			4,480	.006	150	139
	Transportation			25,411	.042			40,603	.050	119	108
	Building & Sites			-0-	-0-			-0-	-0-	-0-	-0-
	Total Indirect Costs			104,825	.172			176,822	.219	127	115
	Final Total Costs			434,233	.712			613,610	.759	107	96

*Inflation factor of 10.8 percent for two-year period July 1973 through June 1975 was provided by Center of Business Economic Research, University of Tennessee, Knoxville. As used in last column it was rounded to 11 percent.

Direct costs as shown in Figure II.16 are those costs specifically defined for Farragut Primary School and so budgeted. It is interesting to note that only two direct cost sub-categories exceed 100 percent of the two-year average after adjustment for inflation. The seven percent increase in salaries reasonably relates to the added time of teachers, principals, and aides needed to make the summer quinmester operate. The large increase in the low cost item of maintenance could relate to the added use of air conditioning and extra maintenance needed. The other direct cost sub-categories were seemingly maintained at or below the 100 percent level by budget allocation. Total direct costs when adjusted for inflation were 89 percent of the two-year average. A reasonable conclusion based on this fact could be that the ESY program at Farragut Primary School was implemented without extra cost.

Four sub-categories of indirect costs when identified with Farragut Primary School and adjusted for inflation exceeded the 100 percent level of the two-year average. These were: indirect costs of instruction, indirect costs of maintenance, fixed charges, food services and transportation. The sub-categories identified with central administration, capital outlay, attendance and health and operation of plant showed unit costs at or below 100 percent of the two-year average when adjusted for inflation. Total indirect costs showed an increase of 16 percent, which reflect system-wide increases rather than those associated with the specific school.

Total costs for this school, when adjusted for inflation, show a slight decrease in unit cost when compared to the two-year average which could indicate that the operation of ESY in this school did not require important increases in school monies.

Cedar Bluff Middle School

Figure II.17 illustrates Cedar Bluff Middle School's direct and indirect cost during the two year average (school years 1972-73 and 1973-74) and the first year of operation of the quinmester system (1974-75). Items listed under the direct cost category which show a percentage increase beyond the 11 percent inflation rate are:

1. Salaries
2. Heat, Light, & Power
3. Maintenance of Buildings

The enormous 2689 percent increase shown in the area of Maintenance of Buildings reflects the installation of an air conditioning cooling system for the school. This expense was combined with the normal maintenance expenses involved at the building level.

It must be noted that the total direct costs for Cedar Bluff Middle did not rise after deduction of the inflation factor of 11 percent.

In the indirect costs category, expenses that rose beyond 100 percent (when corrected for inflation) were:

1. Instruction
2. Maintenance
3. Fixed Charges
4. Food Services
5. Transportation

Total indirect costs for Cedar Bluff Middle School indicate an increase of 16 percent. However, total final costs (which represent both direct and indirect costs) show only a 4 percent increase (after correction for inflation).

Cedar Bluff Primary School

Cedar Bluff Primary School's direct and indirect costs are represented in Figure II.18. These costs represent the two-year average (school years 1972-73 and 1973-74) the first year (1974-75) of the Extended School Year Program. The direct cost item indicating a percentage increase beyond the

FIGURE II.17

COST COMPARISON 1972-73, 1973-74 AVERAGE TO OPERATIONAL 1974-75

Extended School Year Project, Knox County - Farragut Area

Cedar Bluff Middle School

School	Cost Definitions	Two-Yr. Average No. Of Students	Two-Yr. Average Contact Hrs/Yr.	Two-Yr. Average Total Costs	Two-Yr. Average Unit Cost	1974-75 No. Students	1974-75 Contact Hrs.	1974-75 Total Costs	1974-75 Unit Cost	Percent 1974-75 is of 2 yr. Av.	Adjusted for* Inflation
Cedar Bluff Middle School	Direct Costs	1,222	1,410,039			1,295	1,506,732				
	Salaries - Tchrs., Principals, Clerks and Aides			$387,720	$ .275			$475,437	$ .316	115	104
	Heat, Light & Power			20,616	.015			31,229	.021	140	129
	Telephone & Telegraph			1,097	.001			1,090	.001	100	89
	Custodial Services & Supplies			30,852	.002			32,299	.021	96	85
	Buildings and Sites			318,112	.226			31,812	.211	93	82
	Maintenance of Buildings			1,760	.001			40,816	.027	2700	2689
	Total Direct Costs			760,156	.539			898,982	.597	111	100
	Indirect Costs										
	Central Administration			18,704	.013			21,071	.014	108	97
	Instruction			75,026	.053			100,729	.067	126	115
	Capital Outlay & Clearing Accts.			61,894	.044			73,306	.049	111	100
	Attendance & Health Services			2,431	.002			2,444	.002	100	89
	Operation of Plant			3,381	.002			2,594	.002	100	89
	Maintenance			11,013	.008			25,804	.017	213	202
	Fixed Charges			5,819	.004			19,496	.013	325	314
	Food Services			5,815	.004			8,347	.006	150	139
	Transportation			58,423	.041			75,647	.050	122	111
	Building & Sites			-0-	-0-			-0-	-0-	-0-	-0-
	Total Indirect Costs			242,504	.172			329,437	.219	127	116
	Final Total Costs			1,002,660	.711			1,228,420	.815	115	104

* Inflation factor of 10.8 percent for two-year period July 1973 through June 1975 was provided by Center of Business and Economic Research, University of Tennessee, Knoxville. As used in last column it was rounded to 11 percent.

FIGURE II.18

COST COMPARISON 1972-73, 1973-74 AVERAGE TO OPERATIONAL 1974-75

Extended School Year Project, Knox County - Farragut Area

Cedar Bluff Primary School

School	Cost Definitions	Two-Yr. Average No. Of Students	Two-Yr. Average Contact Hrs/Yr.	Two-Yr. Average Total Costs	Two-Yr. Average Unit Cost	1974-75 No. Students	1974-75 Contact Hrs.	1974-75 Total Cost	1974-75 Unit Cost	Percent 1974-75 is of 2 yr. Av.	Adjusted fo Inflation
Cedar Bluff Primary School	Direct Costs	994	1,059,033			1172	1,258,728				
	Salaries - Tchrs., Principals, Clerks & Aides			$326,574	$ .308			$428,450	$ .340	110	99
	Heat, Light & Power			31,992	.030			34,898	.028	93	82
	Telephone & Telegraph			914	.001			969	.001	100	89
	Custodial Services & Supplies			23,023	.002			26,642	.021	96	85
	Buildings and Sites			190,737	.180			190,737	.152	84	73
	Maintenance of Buildings			974	.001			12,858	.010	1000	989
	Total Direct Costs			574,213	.542			694,555	.552	102	91
	Indirect Costs										
	Central Administration			14,004	.013			17,602	.014	108	97
	Instruction			56,463	.053			84,149	.067	126	115
	Capital Outlay & Clearing Accts.			46,460	.044			61,240	.049	111	100
	Attendance & Health Services			1,839	.002			2,041	.002	100	89
	Operation of Plant			2,516	.002			2,167	.002	100	89
	Maintenance			8,249	.008			21,556	.017	213	202
	Fixed Charges			4,250	.004			16,287	.013	325	314
	Food Services			4,360	.004			6,973	.006	150	139
	Transportation			43,971	.042			63,196	.050	119	108
	Building & Sites			-0-	-0-			-0-	-0-	-0-	-0-
	Total Indirect Costs			182,112	.172			275,213	.219	127	116
	Final Total Costs			756,325	.714			969,767	.770	108	97

* Inflation factor of 10.8 percent for two-year period July 1973 through June 1975 was provided by Center of Business and Economic Research, University of Tennessee, Knoxville. As used in last column it was rounded to 11 percent.

11 percent inflation rate is in the maintenance of buildings area. The percentage of increase is 989 percent. This large increase was due to the installation of air-conditioning units along with the normal maintenance of building costs.

The total direct costs decreased 9 percent after deduction of the inflation factor.

Indirect costs showing an increase (after deduction of the inflation factor) are as follows:

1. Instruction
2. Maintenance
3. Fixed Charges
4. Food Services
5. Transportation

Total indirect costs show an increase of 16 percent while final total costs (direct and indirect costs combined) indicate a decrease of 3 percent (after the deduction of the 11 percent).

Summary

The variable in determining cost changes between the two-year average and the 1974-75 operational year identifies with the direct cost category. The high direct cost unit which was 120 percent, when adjusted for inflation, of the two-year average was at Farragut High School. Farragut Middle School was next high with 106 percent, adjusted, of the two-year average. Low direct costs were identified with the two primary schools. Both of these schools showed decreases in costs, when adjusted for inflation, and compared to the two-year average (see Figure II.19).

Indirect costs which are essentially prorations to specific schools of district-wide costs were found to be essentially constant, as would be expected. These costs when compared to the two-year average and adjusted for inflation

FIGURE II.19

COST COMPARISON SUMMARY

KNOX COUNTY - FARRAGUT AREA 1972-74 AVERAGE TO 1974-75

Extended School Year Project

	Unit Costs						Percent 1974-75 is of Two-Year Average					
School	Two-Year Average			1974-75						Adjusted for Inflation *		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
Farragut High School	.355	.172	.527	.465	.219	.683	131	127	130	120	116	119
Farragut Middle School	.309	.171	.480	.364	.219	.583	117	128	128	106	117	117
Farragut Primary School	.540	.172	.712	.540	.219	.759	100	127	107	89	116	96
Cedar Bluff Middle School	.539	.172	.711	.597	.219	.815	111	127	115	100	116	104
Cedar Bluff Primary School	.542	.172	.714	.552	.219	.770	102	127	108	91	116	97

* Inflation factor of 10.8 percent for two-year period July 1973 through June 1975 was provided by Center of Business and Economic Research, University of Tennessee, Knoxville. As used in last column it was rounded to 11 percent.

showed a 27 percent increase. The extent to which the Extended School Year Program influenced district-wide costs is open to speculation.

Important in this summary is the credence put in the use of the inflation factor of 11 percent. This constant was accepted from a computer calculation provided through the Center for Business and Economic Research. It was used in an effort to identify increases associated with the ESY program. It is, however, recognized that some of the increases could have come from sources not identified with ESY and not included in this study.

Increases worthy of notice in sub-categories of direct costs were generally found in all schools and were associated with salaries, heat, light and power, custodial services and supplies and maintenance of buildings. The inflated increases associated with maintenance of buildings have been influenced by costs related to installation and maintenance of air-conditioning. Building maintenance costs are, however, relatively small when considered with total direct costs.

Indirect cost sub-categories which show sizeable increases are those associated with instruction, operation of plant, maintenance, fixed charges, food services and transportation. It should be recognized that these are pro-rated system-wide costs and are only partially influenced by costs specifically associated with the Extended School Year Program.

G. ATTITUDE TOWARD YEAR-ROUND SCHOOL

Voters in Farragut Area

In November 1974 the evaluators mailed a questionnaire concerning ESY to a sample of registered voters in the North Cedar Bluff Precinct (the only precinct in the Farragut area which, at that time, had been listed to permit automated retrieval of voters' names).

At that time information about ESY had been appearing in the local newspapers for approximately a year, curriculum revision efforts had been underway for ten months, the first Summer Quinmester had been completed, and preparations for the third quin of the new program were underway in the schools.

Voter opinion about ESY in November 1974 seemed overwhelmingly positive. Eighty percent of the survey respondents believed that ESY could "improve education in Knox County" and that the program "should be offered to other parts of the county." Eighty-eight percent liked the idea of providing families with alternatives to the summer vacation period for their children. Ninety-five percent of the voters responding agreed that "While the Extended School Year may not reduce educational costs, it can provide for greater use of school buildings and relieve overcrowded schools." (For further survey details, consult Evaluation of the Knox County Extended School Year Program, 1974-75, pp. 136-153.)

The evaluation design originally called for a similar survey of voter opinion in Fall 1976, following the third Summer Quinmester. Newspaper stories in the summer of 1975 forecasting the demise of year-round school in Knox County exerted such a powerful negative influence on public opinion about ESY that a Fall 1975 survey, even if it had been planned, would have been seriously biased.

Students

Student reaction to ESY was measured initially during the 1974 Summer Quin, then again during the second or Fall Quin. Majority opinion was positive; details were given in the 1974-75 evaluation report.

A third measure of student opinion, following nearly four quins of program operation, was administered to third, sixth, and tenth grades in March 1975.

Primary

The form "Student Reaction to ESY - Primary Level" was given to third graders at CBP and FP schools in March 1975. Approximately 89 percent (205) of the third grade class at CBP and 88 percent (180) of third graders enrolled at FP completed questionnaires.

Majorities of ESY third graders expressed positive reactions to eight of eleven questionnaire items. Approximately two-thirds of these primary level respondents said that they (1) were more interested in school this year than before ESY started, (2) were using more library books, tapes, films, records, and other learning materials this year than ever before, (3) liked the new ESY lessons and learning activities better than the lessons teachers used before ESY began, and (4) liked having the chance to go to school in the summer if they wanted to do so. About 55 percent of the third graders responding felt that (1) their teachers liked ESY and (2) they had been told enough about ESY to understand what it was and how it was supposed to work at their schools.

Third grade students indicated essentially negative perceptions in three of their "Student Reaction to ESY" responses. Only 21 percent felt that class size had been reduced since ESY began. Just 25 percent reacted positively to an item related to individualization of instruction, i.e., "Do you have the feeling that your learning assignments are just for you instead of being for everyone in the class?" Forty-three percent of the third graders responding had the impression that student conduct (behavior) had improved since ESY began.

Highly significant differences -- 10 to 23 percentage points -- on 7 of 11 items provided strong indication that third grade students who began the 1974-75 school year with the Summer Quinmester had a more favorable reaction to ESY than did their peers who attended only the "regular" school year.

Twenty-three percent more summer students liked "having the chance to go to school in the summer." Twenty-two percent more liked "the new ESY lessons and learning activities better than the lessons the teachers were using before ESY began." Nineteen percent more felt they understood the operation of ESY at their school.

Twenty-two percent of the third graders who attended the 1974 Summer Quin said that they had had "problems with their classes during the regular school year." The format of the questionnaire for primary students did not, however, permit identification of these problems.

Middle Schools

Sixth graders were selected to represent the attitudes of middle school students toward ESY in March 1975. The instrument "Student Reaction to ESY - Intermediate Level" was administered to the sixth grades at CBM and FM near the end of the fourth ESY quinmester. This questionnaire was completed by 91 percent (282) of the CBM sixth grade and by 91 percent (209) of the FM sixth grade.

More than 70 percent of the ESY sixth graders said that they liked "having the chance to go to school in the summer," that they understood ESY and how it was supposed to work at their school, and that they were "using more tapes, films, records and other learning materials" than they had the previous year. A slim majority (55%) of the sixth grade respondents said they liked "the new ESY lessons and learning activities better than the lessons the teachers were using before ESY began."

Although 71 percent of the middle school sample reported using more tapes, films, and records since ESY began, just 47 percent perceived that they were using more library books. Positive responses were given by less than a majority of sixth graders on four other items related to ESY. Just 39 percent were "more interested in school this year" than before ESY; 24 percent felt that student conduct (behavior) had improved since ESY began; 22 percent felt their learning assignments were being individualized; and only 20 percent perceived that their classes were smaller than prior to ESY.

Sixth grade students who attended the 1974 Summer Quinmester provided more positive responses to all questionnaire items than their peers who began the school year in September. Eighty-seven percent of the summer students favored "ESY lessons and learning activities" over the previous curriculum, while 50 percent of their classmates responded similarly. Twenty percent more Summer '74 students (57% vs. 37%) said they were "more interested in school" than prior to ESY. Eighteen percent more summer students (37% vs. 19%) believed their learning assignments were being individualized.

Seventeen percent of the students who attended the 1974 Summer Quin said that they had had "problems fitting into the classes going on during the regular school year." When asked to identify these problems, a majority of the responses indicated that summer students were behind in their academic work when they returned from a vacation quin. Social problems were also mentioned, e.g., "groups were already formed" when they returned from vacation, and it was hard to "re-establish friendships."

Farragut High

Opinion of secondary students on a number of items related to ESY objectives was sampled in March 1975 using the instrument "Reaction to ESY at Farragut High School." School officials agreed to administer the questionnaire to all sophomores, in their English classes; and to all seniors, in their homerooms. Questionnaires were actually completed by 345 sophomores, or 78 percent of those enrolled in March; and by 174 seniors, or about 60 percent of the seniors enrolled in March.

Majorities of all sophomore and senior respondents expressed favorable opinions on 40 percent of the items on the "Reaction to ESY at Farragut High School." Eighty-seven percent of the students liked having the opportunity to attend school in the summer if they chose to do so. Eighty-two percent said they "had been told enough about the Extended School Year to understand" the program and its operation at FH. Seventy-eight percent of the respondents felt that "having the opportunity to take off a quin other than summer quin makes it easier for a student to find a job if he/she wants one." Fifty-five percent considered "the opportunity to seek employment at a time other than summer to be one of the biggest advantages of ESY." Fifty-four percent of all respondents said that they liked "the new ESY curriculum (lesson plans and learning activities) better than the curriculum the teachers were using before ESY began."

Sophomores and seniors were least positive about the impact of ESY on (1) individualization of instruction, (2) improvement of student conduct, and (3) course offerings at FH. Only 12 percent of the students responding perceived that their learning assignments were just for them, rather than for everyone in the class. Just 20 percent thought that student conduct had improved at FH since ESY began. Only one-fourth of the FH respondents felt that the school offered all the courses they wanted to take in high school.

On four questionnaire items approximately one-third of the student respondents expressed favorable attitudes. Thirty percent felt that there were fewer students in their classes since ESY began. Thirty-three percent said they were "more interested in school this year" than they were before ESY started. One-third also said they had "used more library books this year than ever before." Thirty-six percent said they had been using "more tapes, films, records, and other learning materials this year."

Several of the items on the form "Reaction to ESY at Farragut High School" dealt with student employment. More than half (55%) of the FH students considered "the opportunity to seek employment at a time other than summer to be one of the biggest advantages of ESY." Almost 40 percent of student respondents planned to take, or had taken, a job during the quin they had scheduled for vacation. About a third of these jobs were full-time. Finally, 41 percent of the respondents felt that they could have had their jobs (or promise of a job) even if they had been available for work only during the summer. Undoubtedly responses to all these items were heavily influenced by the tight labor market, with resultant losses of jobs for teenagers, which existed during 1974-75.

Sophomores and seniors differed significantly in their opinions about half of the questions asked in the form "Reaction to ESY at Farragut High School." The biggest differences were related to use of library books and other learning materials: 16 percent more sophomores than seniors said they had "used more library books this year than ever before"; 21 percent more sophomores reported "using more tapes, films, records, and other learning materials this year."

Sophomores were more satisfied with course offerings and scheduling at FH than were seniors. Twenty-eight percent of the sophomores, but only 18 percent of the seniors, felt that FH offered all the courses they wanted to take in high school. More than half (53 percent) of the sophomores, but just 37 percent of the seniors reported that they had "been able to work out a schedule for 1974-75 that allowed (them) to take every course (they) really wanted to take" from the courses actually offered at FH.

Nine percent more seniors than sophomores said they liked the ESY curriculum better than the curriculum of past years. Eight percent more seniors felt that learning assignments were being individualized, and that their classes were smaller since ESY began. Eleven percent more seniors reported having jobs during their vacation quin; and 15 percent more seniors had full-time jobs than did sophomores.

Students who began the 1974-75 school year with the Summer Quinmester had more positive opinions about almost every aspect of the ESY program than did their classmates who attended during the "regular" school year. Summer students exceeded regular students by 28 percent in their positive responses to the question "Are you more interested in school this year than you were before ESY started?" Twenty-two percent more summer students said they liked the new ESY curriculum better than that used in the past Probably reacting to their summer experience, 27 percent more summer students said their classes were smaller since ESY began.

In contrast to these positive responses, half of the 1974 Summer Quin students said they had had "special problems scheduling the classes they needed during the other quinmesters." (See previous discussion under "Student Scheduling".)

Combined Responses

The "Student Reaction to ESY" instruments administered in March 1975 contained eleven items which were the same on primary, intermediate, and secondary forms. Unmistakable trends from primary through middle to secondary could be discerned on eight of the eleven items. In only two cases was the trend upward (positive) from primary to secondary. Secondary students felt more certain than middle school students (by 11 percent) and much more certain than primary students (by 27 percent) of their understanding of ESY and how it should work at their school. Sophomores and seniors at FH also liked "having the chance to go to school in the summer" more than did sixth graders (by 15 percent) or third graders (by 27 percent).

For six questionnaire items responses exhibited a downward (negative) trend from primary -- most positive -- to secondary -- most negative. Middle school and FH students, in that order, were less interested in school in general and in the ESY curriculum than were primary students. The older the students the less they believed that individualization of instruction or improvements in student conduct had accompanied the introduction of ESY. The percentage of students who said they were using more library books than ever before fell from 62 in third grade, to 47 in sixth grade, to 33 at FH.

Middle school respondents exhibited the most favorable attitudes on only two questionnaire items (in every other case middle school students occupied a middle position between primary and secondary students). Seventy-one percent of the sixth graders perceived that they were using "more tapes, films, records, and other learning materials" in conjunction with the ESY curriculum; 68 percent of the third graders and 36 percent of the FH students responded similarly. Seventeen percent of the sixth graders who attended the 1974 Summer Quin reported having problems fitting into classes during the other four quins; these problems were experienced by 22 percent of the primary students and half of the FH students.

1975 Summer Quin

During the week of August 18-22, just prior to the last week of the 1975 Summer Quinmester, all students enrolled in grades 3-12 of the five ESY schools were asked to complete an evaluation instrument designed to assess their attitudes toward the ESY project in general, and their summer experiences in particular. Ninety-one percent, or 430, of the 473 students attending grades 3-12 submitted completed evaluation forms.

Three versions of the student evaluation form were prepared: one appropriate for the primary level, one to be used in the middle schools, and one for FH. The first three questions, however, were the same on all three forms. These items, along with the percentage of positive responses at each level, were:

	Percentage of Students Responding 'Yes'		
Item	Primary	Middle	FH
1. Do you like the idea of having schools in operation year-round (the ESY Program)?	81	89	88
2. Are you glad you decided to come to school during the 1975 Summer Quinmester?	83	91	82
3. Would you like to see ESY continued next summer?	79	79	82

On the whole, middle school students provided slightly more positive responses to these three items. But approximately four-fifths of Summer 1975 participants at all levels enjoyed the Summer Quin, liked ESY, and hoped the year-round program would be continued for another year.

At the same point in the 1974 Summer Quinmester students were asked questions almost identical to Items #1 and #2 above. At that time 94 percent of students in grades 3-12 reported that they liked ESY, and 93 percent said they were glad they had attended the Summer Quin.

Half of the middle and secondary school students felt that the new ESY curriculum was really different from that utilized before ESY began. About 85 percent of the primary level students said they liked the ESY curriculum; half of the middle school and FH students said the new curriculum was 'better than' the curriculum used prior to ESY.

In response to the question "Why did you decide to come to school this summer?" primary and middle school students most frequently gave as their reason the opportunity to take a vacation at a time other than summer. FH students were attracted by the "improved learning opportunities in summer (smaller classes, individual attention, etc.)."

Approximately 60 percent of the students at CBP and CBM, and less than a quarter of the students in the Farragut schools, utilized an opportunity to inform the evaluator of personal observations regarding ESY. Remarks at the middle school level were quite positive; at primary and secondary levels comments were rather evenly divided between favorable and unfavorable. Students who really liked ESY expressed the hope that the program would be continued. Some primary students cited cold due to the low setting for the air conditioning system (at CBM), and absence of library facilities, as negative features of the summer program. Scheduling problems and 'poor organization' headed the list of negative remarks made by FH summer students.

Parents

In March 1975 a questionnaire for parents was sent home with all third, sixth, and tenth grade students in the ESY schools. Approximately one-third of the "Parent Reaction to ESY" forms were returned. These were augmented with forms administered at PTA meetings, so 505 parent questionnaires were eventually processed. For further sampling details see the earlier section of this report "Parental Approval of Curriculum Effects." Questionnaire items related to the ESY curriculum were discussed in that section; responses to questions concerning general attitudes toward ESY are presented in the following paragraphs.

About 80 percent of all parents who completed the "Parent Reaction to ESY" form expressed the opinion that they had "received enough information to know how the Extended School Year Program" was operating in their children's schools. As might be expected, parents of students who attended the 1974 Summer Quinmester at the primary and middle school levels felt more comfortable (positive response rates of 92 and 93 percent) with their degree of understanding of the program.

More than three-fourths of the parents responding favored "the ESY plan for using Knox County Schools on a 12-month basis (year-round)." All parents of middle and high school students who attended the 1974 Summer Quin favored the ESY plan, and 92 percent of the parents of primary Summer Quin students expressed the same opinion.

Less than 15 percent of all parents felt that ESY had "significantly reduced the number of students" in their children's classes.

The idea of a mandatory attendance plan (i.e., assigning students to quinmesters rather than allowing them to choose) to relieve over-crowding appealed to about one-fourth of the parents. Parents of primary and middle school students who attended the Summer Quin were most in favor of the non-voluntary plan (favorable response levels of 51 and 46 percent, respectively).

In response to an open-ended item 57 percent of the respondents identified what they liked BEST about ESY. The most popular response (37% of those who wrote an answer) was the opportunity to choose the time of year when one could be out of school (choice of vacation). Smaller classes during the Summer Quinmester, and at least the promise of smaller classes during the regular school year, were named as positive features of ESY by 28 percent of the parents who wrote an answer. Year-round use of school facilities and personnel was considered an important justifying feature of the program by 16 percent of the parents providing a response in this category. Seven percent of the respondents favored the opportunity students had in the program to set their own goals, and progress through school at their own rates. Other positive features mentioned by several parents included (1) the possibility of saving tax dollars with such a program; (2) the relaxed atmosphere in the summer, with the opportunity for teachers to get to know students better; (3) the chance to make up 9-week failures without having to repeat a whole year's course work; (4) wider variety of subject choices; (5) planned sequencing of skills, K-12; and (6) the opportunity for students to seek employment at a time other than summer.

In summary, a substantial majority of ESY parents appeared to favor the ESY plan for using schools year-round. They most appreciated the opportunity to choose a time other than summer for children's vacations. They also liked the idea of using facilities and personnel year-round, and looked forward to the time when the program might reduce class size and permit more individualization of instruction.

Professional Staff

In October 1974 several questionnaires were submitted by the evaluation team to the teachers and principals at the ESY schools. At that time responses were received from 92 percent of the ESY professional staff; and substantial majorities of the staff expressed positive attitudes toward most of the aspects of ESY which were presented. (For more details see the 1974-75 evaluation report pp. 24-31.)

Interviews with principals and a few teachers during visits to the ESY schools in April 1975, and interviews with 20 percent samples of teachers at each school in December 1975, confirmed the impression that all building level administrators and most teachers approved of the ESY scheduling and curriculum, and hoped the program would be continued.

H. FEASIBILITY OF QUINMESTER ESY PLAN WITH ATTENDANCE OPTIONAL

Only one-fourth of the parents of ESY students who responded to a questionnaire in March 1975 said that they would favor "assigning students to the various quinmesters (a mandatory attendance plan) if this plan would relieve overcrowding in the schools." Because of the anticipated adverse reaction of parents and the community to a mandatory attendance plan, ESY administrators committed their system to an optional or voluntary attendance plan at the outset.

Summer Enrollment

One of the ESY objectives was to provide a good summer program and to publicize it within the community so that at least 25 percent of the students at ESY schools would attend the Summer Quin voluntarily. Thirteen percent attended the 1974 Summer Quin, and this was considered a good start. But some of the students who attended the first summer experienced problems during subsequent quinmesters which were related to summer attendance. An intensive public relations effort was needed to (1) offset adverse reactions expressed by disgruntled Summer '74 students and (2) convince other students and their parents of the potential benefits of summer attendance.

At one school the principal mounted his own small publicity program just prior to the date for students to pre-enroll for the 1975 Summer Quin. A higher percentage of the student body at that school elected to attend the 1975 Summer Quin than was expected, based on Summer enrollment percentages at the other schools. And half of the students who attended the 1974 Summer Quin at that school chose to return for Summer '75; at the other schools approximately one-third of the 1974 Summer Quin students returned for Summer '75. These statistics provide evidence of the effect a well-organized public relations campaign might have had on the 1975 Summer Quin enrollment.

While the importance of communicating with students and parents regarding ESY cannot be over-emphasized, this is but the first step in a community-wide public relations effort that must be mounted if year-round school programs, especially those dependent on voluntary summer attendance, are to succeed. The February 9, 1976 issue of Education U.S.A. quoted Carl Meseck, a Glendale, California city councilman and YMCA director: "Year-round education does not have a ghost of a chance of success if educators continue to ignore the local community and the private agencies. I could go into any community and quickly organize enough opposition to defeat year-round education if educators continue to destroy things like Boy Scout camps, YMCA programs and Camp Fire Girls by competing with them during intersessions. These agencies have a legitimate place in the broad education process and they will fight back" (p. 137).

Promotion of the 1975 Summer Quin turned out to be minimal at most ESY schools, primarily because the central office staff did not provide strong leadership in this area. As a consequence, the Summer '75 enrollment was eleven percent, two percent lower than that of the previous summer. The lack of an increase in enrollment for the second summer session convinced Knox County administrators, principally the superintendent of the system, that the year-round plan was not popular enough to warrant the extra expenditures necessary to keep the schools open during the summer.

The Summer '74 students who did not attend the 1975 Summer Quin, but had returned to ESY schools in September 1975 (18% had not) were quizzed in October about their reasons for not coming back for the second summer. Their responses indicated that families associated with ESY schools simply found it inconvenient, for one reason or another, to have a family member in school during the summer. The tradition of summer as the time for vacation from school was just too strong to permit the ESY families to break it two years in a row.

Twenty percent of the parents (who were asked to respond for their children in grades 1-3) of primary students said their children had not attended the Summer Quin because of academic problems encountered in subsequent quins which could be attributed to Summer '74 attendance. Only eight percent of middle and high school students gave academic problems as their reason for not coming back the second summer.

At the primary level the three chief reasons given for not repeating the summer experience were (1) inconvenience to other family members if one were in school during the summer, (2) academic problems due to Summer '74 attendance, and (3) missing summer activities such as swimming, camp, and family trips.

Responses from students in both middle schools produced this hierarchy of reasons for not returning: (1) missed having other children to play with during vacation quin, (2) missed summer activities, and (3) inconvenient for other family members to have one in school during the summer.

FH students who failed to return for the second summer apparently were disturbed by a feeling of being out of phase with the traditional calendar of activities for their age group, and they did not want to repeat that experience in 1975-76. One-quarter said they missed summer activities in 1974, 16 percent were concerned because age-mates were in school while they were on vacation, 15 percent said they had had opportunities to take a trip or job during Summer '75.

Community Willingness to Finance ESY

The Knox County system approached its year-round experiment from a sound educational base. Curriculum revision, K-12, was to be an essential prerequisite for the conversion to a twelve-month calendar. The first, or Summer, quinmester was to be an integral part of the curricular structure, not just an add-on for recreation or possible enrichment. Each subject was divided into five discrete units, called modules, which permitted a starting point for students returning from vacation, an ending point for students leaving for a quin, and continuity for all concerned. The modular structure allowed students with problems to repeat a 9-week segment of a course immediately, rather than a year later when a whole course had been failed. The Summer Quin could be used for remediation, enrichment, acceleration, or as a time for students with special needs to benefit from small class size and increased attention from teachers.

Don Glines, California's year-round education coordinator, told a national year-round education seminar in January 1976 that "A move is beginning to recognize year-round education as a philosophy of learning." Where building-oriented people trying to save a dollar have been in charge of year-round programs, the teachers tend to teach traditional education in a year-round calendar. But where curriculum people are involved, and curriculum changes are made, year-round programming is going ahead ("As California Goes..", 1976, p. 139).

Majorities of teachers, administrators, and students at the ESY schools -- those most vitally affected by it -- believe they have a new curriculum that is better than that being used in previous years. Undoubtedly the curriculum will be adopted on a permanent basis -- approved by the school board and financed by the community -- regardless of the fate of year-round programming.

This is ironic since the concept of year-round scheduling of personnel and facilities was originally used as the vehicle for obtaining conceptual and financial support for revamping the curriculum.

This irony is compounded by the knowledge that, unfortunately, it is not possible to tell how much community support might have been obtained for year-round scheduling, or how many students might have been encouraged to attend the Summer Quinmester IF school administrators had (1) effectively publicized the program among students and parents, and within the community, and (2) fully supported the program throughout its three-year trial.

As it happened, administrative support was withdrawn before the second year of ESY operation even began. Thus, publicity prior to the second Summer Quin was minimal; and just before that Quin began the County Superintendent stated publicly that the program should not be continued because the Summer Quin was (1) too expensive, and (2) not popular enough with students and their families. Given these background factors, the slim summer enrollment in 1975 was a self-fulfilling prophecy, and eventual curtailment of the ESY project a foregone conclusion. Indeed, Title III funding for the full third-year plan of operation was withdrawn during Fall 1975, and on March 3, 1976 the Knox County Board of Education voted to cut out the 1976 Summer Quin and discontinue the ESY experiment with the fifth quin of the 1975-76 school year.

ESY At Primary, Intermediate, and Secondary Levels

When ESY principals were interviewed during April 1975 visits, there was no consensus among principals that the program worked better at one organizational level than at the others. The high school principal felt that the idea of attending school during the summer might be more acceptable to students at the secondary level. One middle school principal said that ESY might be easier to manage in the middle school, citing scheduling difficulties as a drawback at the high school level. The other middle school principal said he felt there might be more willingness to try new programs, such as ESY, at the primary level. Both primary principals felt ESY was working well at their schools, but both felt that first graders who attended the Summer Quinmester should be encouraged not to take their vacation during the second or Fall Quinmester. During Fall 1974 much orientation and readiness assessment took place in the first grade, and this was not duplicated _in toto_ during the Summer Quin. While this situation could be corrected, the primary principals nevertheless felt that first graders needed to experience the continuity of two or more successive quinmesters of school work.

In short, the ESY principals as a group saw advantages and disadvantages for the program at each of the three organizational levels.

SECTION III.

EVALUATION SUMMARY AND RECOMMENDATIONS

A. INTRODUCTION

In June 1974 students in five Knox County (Tennessee) schools (two primary, two middle, and one high school) became involved in a three-year trial of a voluntary quinmester plan for extending the school year. Curriculum revision, K-12, was the principal thrust of the ESY project, but administrators also hoped to relieve overcrowding in the schools and to effect more efficient use of professional staff and physical facilities.

During the first two years of the program substantial progress was made toward standardizing curriculum goals and objectives and providing teachers with current instructional resources. However, with Summer Quinmester attendance on a voluntary basis, only 13 percent (650 students) of the total five-school enrollment was present during the 1974 Summer Quin, and the percentage fell to 11 (620 students) during the 1975 Summer Quin. Thus overcrowding during the four remaining quinmesters was not substantially reduced, and the additional expense of operating a summer program was not offset by economies effected during the regular school year. Reacting almost exclusively to financial considerations, the local school board voted in March 1976 to cut short the extended school year experiment by eliminating the third Summer Quin.

B. SUMMARY OF FINDINGS

The New Curriculum

Student Morale and Motivation

Indications of the effect of the ESY curriculum changes on student morale and motivation at the five project schools were obtained from school records and from questionnaires administered to samples of students at each level: primary, middle, and secondary. When school records were used, figures from the first year of ESY operation were compared with those for the three years prior to ESY, i.e., 1971-72, 1972-73, and 1973-74. While none of the indicators, as discussed below, revealed a dramatic positive change that could be attributed to the ESY materials, no indicator showed a significant negative change, either. Directions discernible in the data supported an overall conclusion that the ESY curriculum certainly had not had a significant negative influence on student morale or motivation, and in some cases the effect appeared to be a positive one.

- Attendance at all five ESY schools increased during the first year of ESY; but another set of yearly figures was needed to verify the upward trend since attendance had dropped at all five schools during 1973-74, the year prior to ESY.

- There was no significant change in the overall dropout rate for the five schools between 1971-72 and 1974-75.

- ESY principals saw no significant change that could be attributed to ESY in the number or seriousness of disciplinary referrals they received from teachers.

- Principals reported that there had not been a recognizable change since ESY began in the number or seriousness of incidents involving vandalism at their schools.

· Librarians at the ESY schools reported that ESY curriculum changes had increased student use of library reference materials. However, teachers said they had had problems obtaining the variety and quantities of classroom materials they needed to implement the ESY curriculum modules. Therefore, usage of the ESY modules had not increased student use of instructional materials other than those available in the libraries.

· Since no comparable measure of student attitude toward school prior to 1974-75 was available, there was no way to determine whether the ESY curriculum changes had produced an improvement or a decline in student attitudes. However, administration of the appropriate form of the "School Sentiment Index" (developed by the Instructional Objectives Exchange at UCLA) at each level (primary, intermediate, and secondary) provided evidence of favorable attitudes toward school in general at all five schools. Without exception, the students exhibiting the most favorable attitudes at each school were those who had attended the Summer Quinmester. Thus it could be assumed that the new curriculum had not exerted a significant negative influence on student attitudes.

Indeed at the primary level students expressed attitudes that indicated a high degree of satisfaction with their curriculum. An average of 82 percent of the third grade students (chosen to represent all primary students) at both primary schools responded favorably to questions about their school subjects. Third graders exhibited the most positive attitudes (86 to 88 percent favorable responses) toward art, social studies, reading, and science, in that order. Significantly, three of the four most popular subjects were those in which ESY-associated curriculum modules had been introduced during 1974-75.

More than 60 percent of middle and high school students at the ESY schools expressed favorable attitudes toward items in the Learning subscale of the "School Sentiment Index" -- the subscale with most relevance for judging the effects of the ESY curriculum.

- Individualization of instruction was one of the principal goals of the curriculum revisions associated with ESY. Perhaps due in large part to the inflated pupil-teacher ratios at the crowded ESY schools, the goal of individualizing instruction for at least a majority of the ESY students was not attained during the first operational year. Questionnaire responses indicated that no more than 15 percent of the high school students, 20 percent of the middle school students, and 25 percent of the primary students perceived that their instructional programs were designed to meet their individual abilities, interests, and needs.

Professional Staff Satisfaction with Curriculum

Interviews with a sample of ESY teachers at each school midway in the second operational year revealed that most teachers:

- approved of the contents of the document Instructional Goals and Objectives which had been written by Knox County teachers and supervisors to guide the development of ESY curriculum modules. Teachers apparently appreciated having some knowledge of system-wide expectations regarding subject area content and student performance.
- appreciated having the opportunity to write and to revise the curriculum modules.
- used the modules as resource units rather than as series of daily lesson plans.

·approved generally of module content, viewing performance objectives and suggested learning activities as the most helpful components, and evaluation of pupil performance as the least helpful.

·viewed limited access to library and audio-visual resource materials as a major obstacle to full utilization of the ESY modules.

·did not consider the ESY modules particularly helpful in individualizing instruction.

·were handicapped by the delays they had experienced in getting revised copies of curriculum modules from the central administrative office.

Unquestionably the curriculum modules were considered a major teaching resource by the ESY faculties. Teachers who wrote modules used them most, but a high percentage of the other teachers referred to them frequently; and even those who did not use the modules daily had consulted the sections containing performance objectives.

Staff turnover data collected for the school years 1971-72 through 1974-75 did not indicate any dissatisfaction with ESY on the part of teachers or administrators at the five project schools. Due in part to a tightening labor market, the number of teachers leaving the system or transferring from ESY schools to other schools in Knox County declined steadily from 1972 through 1975. No upsurge in resignations or requests for transfer occurred when the ESY curriculum changes were instituted.

Student Achievement

Metropolitan Achievement Test scores for grades 3, 5, and 8 at the ESY primary and middle schools were compared for the years pre- and post-ESY. Reading achievement showed a small, non-significant, increase following the initiation of the ESY project. Mathematics achievement declined very slightly;

and instituting the ESY curriculum did not interrupt the gradual, but unmistakable, decline in science and social studies achievement which occurred between 1971 and 1975.

In direct opposition to the national decline in test scores over the same period, ACT scores of ESY high school students actually increased in two subject areas, and remained stable in a third, between 1972 and 1975. The ESY intervention did not interrupt these trends, and in fact four of five ACT scores for the first operational year were higher than the corresponding scores the previous year. Between 1972 and 1975 the ACT composite score rose from the 47th to the 49th percentile. The mathematics score was virtually the same over the years of interest; English and social studies scores rose. Only natural science scores showed a notable decline.

Parental Approval of Curriculum Effects

In November 1974 almost two-thirds of a sample of registered voters in the area of West Knox County served by the ESY schools agreed with the statement, "The Knox County Schools are providing students with the kind of educational experience that they need." But when a sample of ESY parents was questioned in March 1975 it was evident that parental approval of the new ESY curriculum was somewhat less enthusiastic.

Approximately half of the ESY parents felt they understood how the new curriculum was working in their children's schools. Parents did not agree on the worth of the new curriculum as compared with the curriculum used in the schools in past years: one third said the new curriculum was better than the old, one third was undecided, one third said the new curriculum was no better than the old. Half of the parents expressed the opinion that their children were sufficiently aware of the progress they were making toward achieving curriculum objectives.

Parents whose children attended the Summer Quin had more favorable opinions regarding the ESY curriculum than did parents whose children attended only the regular school year. Yet at the primary school level 42 percent of these Summer Quin parents said their youngsters had had problems "fitting into classes during the regular school year"; at the secondary level this figure was 39 percent and at the middle school level 29 percent. Problems most frequently identified were: scheduling at the high school, and lack of articulation between the Summer Quin and the next quin attended at the primary and middle schools (i.e., summer students were either behind their classmates when they returned, or ahead and then required to repeat work accomplished during the summer). According to parents, summer students who chose to vacation during the second or Fall Quin had the most trouble.

Administration of ESY

The curriculum changes associated with ESY increased standardization of expectations with regard to what teachers would teach and what students would learn. The five ESY principals believed the changes were making it easier for them to evaluate the instructional program in their schools. The County's new goals and objectives and the more specific objectives in the curriculum modules gave ESY principals 1) guidance concerning activities being carried out in individual subject areas throughout the year, and 2) criteria against which to measure student achievement in each subject.

Scheduling of classes at the high school during the first year of ESY had not satisfied the majority of secondary students. Only one-fourth of the students sampled (sophomores and seniors) said the school offered all the courses they wanted to take in high school. Considering the courses that were available, less than half (48%) said they had been able to work out a schedule for the year that had allowed them to take all the courses they wanted to take. Sixty percent of the sophomores who attended the Summer Quin reported having scheduling problems that resulted from their summer attendance.

Organizational Structure and Professional Development

Administrators and supervisors involved in ESY felt they understood clearly their roles in connection with the program, and they believed they had the competencies required to carry out those rolls. They also perceived that they had been given the appropriate authority to accomplish their assignments. During the first year of ESY operation administrators and supervisors reported that their involvement in the new program had changed their jobs in ways that interfered with their other responsibilities, so they were having to spend more time at work. During the second year of operation this changed: ways were found to integrate ESY-related responsibilities into existing work assignments so that both could be performed without a substantial increase in work time. Administrators and supervisors derived an even greater sense of satisfaction from their involvement in ESY during the second year then during the first. They believed ESY had improved the school system and should be continued if possible.

Administrators and supervisors had a positive impression of their ESY-related orientation and professional development program. This program was much stronger, however, during 1974-75 than during 1975-76. Development of the new curriculum materials constituted a substantial part of the professional development program for instructional leadership personnel. Supervisors, principals, and teachers worked together on strategies for implementing the materials, and on evaluation and revision of the materials.

The design and implementation of in-service programs for teachers was the responsibility of the principal at each of the five ESY schools. The principals felt these programs had been effective in providing opportunities for teachers to develop the knowledge, attitudes, and skills they needed to carry out the ESY program.

Cost Analysis

The variable in determining cost changes between the two-year average (1972-73 and 1973-74) and the 1974-75 operational year identifies with the direct cost category. The high direct cost unit which was 120 percent, when adjusted for inflation, of the two-year average was at Farragut High School. Farragut Middle School was next high with 106 percent, adjusted, of the two-year average. Low direct costs were identified with the two primary schools. Both of these schools showed decreases in costs, when adjusted for inflation, and compared to the two-year average.

Indirect costs which are essentially prorations to specific schools of district-wide costs were found to be essentially constant, as would be expected. These costs when compared to the two-year average and adjusted for inflation showed a 27 percent increase. The extent to which the Extended School Year Program influenced district-wide costs is open to speculation.

Increases worthy of notice in sub-categories of direct costs were generally found in all schools and were associated with salaries, heat, light and power, custodial services and supplies and maintenance of buildings. The inflated increases associated with maintenance of buildings were influenced by costs related to installation and maintenance of air-conditioning. Building maintenance costs are, however, relatively small when considered with total direct costs.

Indirect cost sub-categories which show sizeable increases are those associated with instruction, operation of plant, maintenance, fixed charges, food services and transportation. It should be recognized that these were pro-rated system-wide costs and were only partially influenced by costs specifically associated with the Extended School Year Program.

There is little evidence to support large increases in costs associated with, or directly related to, the Extended School Year Program.

Cost of installation and maintenance of air conditioning, when compared to total unit costs, has not been an important factor in over-all cost increases.

Increases in costs are modest enough to seem to be justified in terms of the student benefits provided by the Program.

Increased costs in the schools in the Farragut Area of the Knox County Schools are not at all excessive when compared to system-wide increases in costs. Comparison of direct and indirect costs in the study attest to this fact.

It is recommended that the facts and indications revealed by this study be further verified by using 1975-76 data in a new analysis. Such analysis should compare 1975-76 to the 1972-73 -- 1973-74 average and compare the average of 1974-75 -- 1975-76 to the 1972-73 -- 1973-74 average. It is anticipated that such analysis would reduce some of the direct cost extremes and verify the cost increase areas.

Attitudes Toward Year-Round Programming

Voters in the Farragut area expressed favorable attitudes toward ESY when sampled in November 1974. Eighty percent of registered voters responding to a poll conducted by mail believed that ESY could "improve education in Knox County" and that the program "should be offered to other parts of the county." Eighty-eight percent liked the idea of providing families with alternatives to the summer vacation period for their children. Ninety-five percent of the voters responding agreed that "While the Extended School Year may not reduce educational costs, it can provide for greater use of school buildings and relieve overcrowded schools."

Students in the ESY schools were, in general, favorably impressed with their educational opportunities under the new program. Eighty-seven percent of the high school students questioned, 70 percent of the middle school students, and two-thirds of the primary students liked having the chance to go to school during the summer if they wanted to do so. Almost 80 percent of the high school respondents felt that "having the opportunity to take off a quin other than the Summer Quin makes it easier for a student to find a job if he wants one." Fifty-five percent considered "the opportunity to seek employment at a time other than summer to be one of the biggest advantages of ESY."

Two-thirds of the primary level respondents said they were more interested in school than before ESY began; 39 percent of the middle school sample, and 33 percent of the secondary sample expressed a similar opinion. The new ESY curriculum was apparently preferred over the previous curriculum by two-thirds of the primary students, 55 percent of the middle school students, and 54 percent of the secondary students.

At all levels students who attended the Summer Quin expressed more favorable attitudes toward ESY than did those who were enrolled only during the traditional school year. During the 1975 Summer Quin 85 percent of the students at all five schools said they liked the idea of having the schools in operation year-round, and were glad to be participating in the Summer Quin. Eighty percent hoped ESY would be operational during the summer of 1976.

More than three-fourths of parents responding to a questionnaire favored "the ESY plan for using Knox County Schools on a 12-month basis." Only one quarter would support a mandatory attendance plan, however. In order of preference, parents' reasons for approving of ESY included: having the opportunity to choose the time of year when one's children could be out of school; smaller classes during the Summer Quin, and the promise of smaller classes during the regular school year; year-round utilization of school facilities and personnel; and curriculum improvement.

Interviews with principals and teachers at the ESY schools strengthened the conclusion, based on data obtained the previous year, that the professional staff generally approved of the ESY scheduling and curriculum, and hoped the program would be continued.

The responses of high school students indicated that they were somewhat more enthusiastic about having the opportunity to attend school during the summer than were primary and middle school students. However, students at all three levels expressed a high degree of approval of the year-round program; and ESY administrators felt that the program was accepted and functioning smoothly at all five participating schools. The administrators were not able to cite a distinct advantage or disadvantage for year-round operation at any of the three organizational levels.

Feasibility of Quinmester Plan with Attendance Optional

ESY administrators correctly anticipated an adverse reaction of a majority of parents to mandatory attendance for the quinmester plan. Consequently, no group of students was required to attend the Summer Quin, and very few chose to attend. Administrators hoped at least 25 percent of the total five-school enrollment would voluntarily take advantage of the opportunity to go to school in the summer. Thirteen percent actually enrolled during the

1974 Summer Quin and 11 percent attended the 1975 Summer Quin. Enrollment during the other four quins was not reduced by more than five percent, thus anticipated operational economies were not realized. When in March 1976 the Knox County Superintendent told the Board of Education that the property tax rate would have to be increased to provide funds for continued additional expenses of the Summer Quin, the Board assumed that the taxpayers would not approve, and voted to cancel the 1976 Summer Quin.

The failure of school administrators to mount a strong public relations effort in favor of the 1975 Summer Quinmester during the preceding spring made it impossible to determine what level of support the community might have been persuaded to give the summer program. Then in June, just before the opening of the 1975 Summer Quin, the Knox County Superintendent made a public announcement that the summer program was too expensive, and not popular enough, to warrant continuation. The Superintendent's remarks, coupled with the lack of publicity, created an atmosphere of uncertainty about the future of ESY which permeated the second Summer Quin and continued to undermine the program throughout its second year of operation. Ultimately, Title III funding for the third operational year of the experiment was withdrawn, and the school board curtailed its support.

C. RECOMMENDATIONS

Year-Round Scheduling

Since year-round scheduling at the five ESY schools is to be discontinued at the end of the current school year, recommendations regarding that aspect of the ESY project may seem superfluous. However, in light of the fact that the quinmester plan was not given a fair or full trial (It was discontinued after two years of operation rather than the three originally planned; and effective administrative support was withdrawn at the end of the first operational year), and that the school population in West Knox County is still growing at the rate of 15 percent per year, it is not inconceivable that year-round programming would be tried again in the Knox County system. Therefore, it might be useful to suggest some strategies from which the program's operation could have benefitted.

Initially it should be emphasized that Knox County's ESY experiment was soundly based on curriculum reforms that made the Summer Quinmester an integral part of the educational program. Any future trial of year-round scheduling should be undertaken with the same emphasis on curriculum.

In fact, current leaders of the year-round education movement emphasize that the year-round concept should not be advocated as a money-saver or a quick route to improved student achievement, but rather as a sound educational option that may meet the unique needs of some members of a learning community ("As California Goes...", 1976, p. 137).

·Students and parents affected by a year-round program must be carefully cultivated as supporters of the program. Most important, they must be fully acquainted with the potential benefits of attendance in the summer.

·One or more individuals from the school system must coordinate a public relations program aimed at gaining the support of the entire community for year-round scheduling. Church groups, Boy and Girl Scouts, YM and YWCAs, Camp Fire Girls, and private recreational clubs, among others, need advance information about the schools' year-round schedule so that their activities can be planned during intersessions, or several times throughout the year to accommodate students vacationing at times other than summer.

Unless summer attendance (or year-round attendance as in the 45-15 plan of operation) is mandatory, the summer program probably will never attract as many students as other segments of the school year. Thus it would make sense in an area such as the Farragut attendance zone -- where the same curriculum is utilized in all schools -- to consolidate the summer operations, using one building for each organizational level rather than two (or more).

The New Curriculum

Presumably the revised curriculum instituted as part of the ESY experiment will be retained even though year-round scheduling is discontinued.

First, it should be acknowledged that substantial majorities of students, teachers, and administrators felt the new curriculum represented an improvement over the curriculum of past years. Teachers, especially, were happy to have the performance objectives and suggested instructional strategies contained in the curriculum modules. Administrators welcomed the introduction of some standardization of subject area content and expected student outcomes because this provided more structure for their efforts to evaluate the educational programs in their schools.

In three areas the professional staff felt the new curriculum required increased support: supply of instructional materials suggested in the modules, supply of revised modules, and implementation of the primary goal of individualization of instruction.

·Teachers and librarians at all five schools said they needed more of the books and audio-visual materials suggested in the modules. A few of the suggested resources were not even owned by the school system; but the most frequent complaint was that there were not enough copies of materials to supply the need when nearly all students taking a particular subject were supposedly covering the same topics during a given nine-week period. Teachers, librarians, and supervisors should meet and attempt to develop a solution to the materials problem. With the elimination of the Summer Quin, and thus the need to accommodate students returning from different vacation periods, perhaps teachers of the same subject can agree to vary their sequencing of the available modules, thus easing the simultaneous demands for certain sets of materials. In any case, materials not currently available in the system should be purchased.

·Teachers were pleased to have had opportunities to become involved in the processes of module evaluation and revision, and this involvement should be continued. However, teachers in most subject areas expressed feelings of frustration concerning their lack of access to completed copies of revised modules. If teachers are expected to utilize the new curriculum materials, they must have the revisions because some of the early drafts were exceedingly rough and a few contained serious deficiencies.

·The principal goal of the curricular revisions associated with ESY was to promote individualization of instruction. However, teachers using the new curriculum modules did not consider them particularly helpful in providing for individualization. Three recommendations seem appropriate in this connection:

1) the process of module revision should incorporate a focus on components of the modules that might be strengthened, or even added, to promote their usage in individualized learning programs;

2) teachers at all levels should be assisted, through intensive in-service programs over a period of several years, in developing their own techniques for individualizing instruction; and

3) teacher/pupil ratios must be reduced to make it feasible for teachers to utilize techniques for individualization.

REFERENCES

REFERENCES

Adams, Velma A. "The Extended School Year: A Status Report," *School Management*, 14:13-19, June 1970.

Anderson, B. Robert, "'Four Quarter' Makes A Whole Year in Atlanta," *School Management*, 16:7-11, June 1972.

"As California Goes, So Goes Year-Round Education," *Education U.S.A.*, 18:137 and 139, February 1976.

Banta, Trudy W. *Evaluation of the Knox County Extended School Year Program - 1974-75*. Knoxville: University of Tennessee, Bureau of Educational Research and Service, 1975.

Glass, Gene V., Victor L. Willson, and John M. Gottman. *Design and Analysis of Time-Series Experiments*. Boulder, Colorado Associated University Press, 1975.

Instructional Objectives Exchange. *Attitude Toward School K-12*. Rev. ed. Los Angeles, IOX, 1972.

National Education Association. Division of Instruction and Professional Development. *Year-Round Schools*. Washington, D.C., May 1974. Pp. 64. ED 095632.

Specific sources within National Education Association:

Alvary, Ronald A.F. "A Look at the Year-Round School," *American Education*, 9:back cover, January 1973.

Callahan, John J. and others. *Year-Round Schools and Urban School Finance*. Charlottesville, University of Virginia, Bureau of Educational Research, 1973. Pp. 25.

Howe, P.H. "Year-Round School Makes Good Business Sense," *American School Board Journal*, 160:6-48, February 1973.

McGraw, Pat. "Junior Doesn't Have to Bale Hay Anymore," *Compact*, 7:10-12, November/December 1973.

Punke, Harold H. "Accountability and the Quarter System," *Bulletin of National Association of Secondary School Principals*, 57:57-64, January 1973.

Nygaard, Debra D. *Evaluation of Year-Round School Programs*. An ERS Research Brief. Washington, D.C., Educational Research Service, 1974. Pp. 43. ED 087092.

Rice, Paul D., Johannes Olsen, David Parks, and D.E. Parks. *Year-Round Schools: Models and Issues*. Blacksburg, Virginia Polytechnic Institute and State University, National Council for Year-Round Education, May 1975. Pp. 171.

Ross, Doris M. A Legislator's Guide to Year-Round Schools. A Research Brief. Denver, Education Commission of the States, Department of Research Information Services, January 1975. Pp. 50. ED 101440.

Thomas, George Isaiah. Administrator's Guide to the Year-Round School. West Nyack, New York, Parker Publishing Company, Inc., 1973. Pp. 276.

Tyler, Leona E. The Psychology of Human Differences. 3rd ed. New York, Appleton-Century-Crofts, 1965.

APPENDIX A

EXPLANATION OF FIGURES AP.1 - AP.44

AP.1 Percentile Otis-Lennon IQ and Metropolitan Achievement Test Scores in Reading for Grade 3, School 1, 1972-73 Through 1975-76 and Summer 1974[A] and Summer 1975.

AP.2 Differences Between Achievement in Reading and IQ (i.e., Percentile Metropolitan score minus percentile Otis-Lennon IQ) for Grade 3, School 1, 1972-73 Through 1975-76 and Summer 1974 and Summer 1975.

AP.3 (See AP.1 above for exact details) Percentile IQ and Metropolitan Math Scores for Grade 3, School 1, 1972-75 and Two Summers.

AP.4 (See AP.2 above for method of calculating) Differences Between Achievement in Math and IQ for Grade 3, School 1, 1972-75 and Two Summers.

AP.5 (See AP.1) Percentile IQ and Metropolitan Reading Scores for Grade 3, School 2, 1972-75 and Two Summers.

AP.6 (See AP.2) Differences Between Achievement in Reading and IQ for Grade 3, School 2, 1972-75 and Two Summers.

AP.7 (See AP.1) Percentile IQ and Metropolitan Math Scores for Grade 3, School 2, 1972-75 and Two Summers.

AP.8 (See AP.2) Differences Between Achievement in Math and IQ for Grade 5, School 3, 1971-75 and Two Summers.

AP.9 (See AP.1) Percentile IQ and Metropolitan Reading Scores for Grade 5, School 3, 1971-75 and Two Summers.

AP.10 (See AP.2) Differences Between Achievement in Reading and IQ for Grade 5, School 3, 1971-75 and Two Summers.

AP.11 (See AP.1) Percentile IQ and Metropolitan Math Scores for Grade 5, School 3, 1971-75 and Two Summers.

AP.12 (See AP.2) Differences Between Achievement in Math and IQ for Grade 5, School 3, 1971-75 and Two Summers.

AP.13 (See AP.1) Percentile IQ and Metropolitan Science Scores for Grade 5, School 3, 1971-75 and Two Summers.

AP.14 (See AP.2) Differences Between Achievement in Science and IQ for Grade 5, School 3, 1971-75 and Two Summers.

[A] Summer 1974 and Summer 1975 students were tested during the Summer Quinmester. Their classmates attending the regular school year were tested during the following Fall Quinmester. Test scores for the years 1974-5 and 1975-6 include the scores of Summer Quin class members so as to render them comparable to scores obtained in the years prior to ESY.

AP.15 (See AP.1) Percentile IQ and Metropolitan Social Studies Scores for Grade 5, School 3, 1971-75 and Two Summers.

AP.16 (See AP.2) Differences Between Achievement in Social Studies and IQ for Grade 5, School 3, 1971-75 and Two Summers.

AP.17 (See AP.1) Percentile IQ and Metropolitan Reading Scores for Grade 5, School 4, 1971-75 and Two Summers.

AP.18 (See AP.2) Differences Between Achievement in Reading and IQ for Grade 5, School 4, 1971-75 and Two Summers.

AP.19 (See AP.1) Percentile IQ and Metropolitan Math Scores for Grade 5, School 4, 1971-75 and Two Summers.

AP.20 (See AP.2) Differences Between Achievement in Math and IQ for Grade 5, School 4, 1971-75 and Two Summers.

AP.21 (See AP.1) Percentile IQ and Metropolitan Science Scores for Grade 5, School 4, 1971-75 and Two Summers.

AP.22 (See AP.2) Differences Between Achievement in Science and IQ for Grade 5, School 4, 1971-75 and Two Summers.

AP.23 (See AP.1) Percentile IQ and Metropolitan Social Studies for Grade 5, School 4, 1971-75 and Two Summers.

AP.24 (See AP.2) Differences Between Achievement in Social Studies for Grade 5, School 4, 1971-75 and Two Summers.

AP.25 (See AP.1) Percentile IQ and Metropolitan Reading Scores for Grade 8, School 3, 1971-75[B] and Two Summers.

AP.26 (See AP.2) Differences Between Achievement in Reading and IQ for Grade 8, School 3, 1971-75 and Two Summers.

AP.27 (See AP.1) Percentile IQ and Metropolitan Math scores for Grade 8, School 3, 1971-75 and Two Summers.

AP.28 (See AP.2) Differences Between Achievement in Math and IQ for Grade 8, School 3, 1971-75 and Two Summers.

AP.29 (See AP.1) Percentile IQ and Metropolitan Science Scores for Grade 8, School 3, 1971-75 and Two Summers.

AP.30 (See AP.2) Differences Between Achievement in Science and IQ for Grade 8, School 3, 1971-75 and Two Summers.

AP.31 (See AP.1) Percentile IQ and Metropolitan Social Studies Scores for Grade 8, School 3, 1971-75 and Two Summers.

[B] In 1975-76, due to a change in testing policy, seventh graders rather than eighth graders were tested at School 3.

AP.32 (See AP.2) Differences Between Achievement in Social Studies and IQ for Grade 8, School 3, 1971-75 and Two Summers.

AP.33 (See AP.1) Percentile IQ and Metropolitan Reading Scores for Grade 8, School 4, 1971-75 and Two Summers.

AP.34 (See AP.2) Differences Between Achievement in Reading and IQ for Grade 8, School 4, 1971-75 and Two Summers.

AP.35 (See AP.1) Percentile IQ and Metropolitan Math Scores for Grade 8, School 4, 1971-75 and Two Summers.

AP.36 (See AP.2) Differences Between Achievement in Math and IQ for Grade 8, School 4, 1971-75 and Two Summers.

AP.37 (See AP.1) Percentile IQ and Metropolitan Science Scores for Grade 8, School 4, 1971-75 and Two Summers.

AP.38 (See AP.2) Differences Between Achievement in Science and IQ for Grade 8, School 4, 1971-75 and Two Summers.

AP.39 (See AP.1) Percentile IQ and Metropolitan Social Studies Scores for Grade 8, School 4, 1971-75 and Two Summers.

AP.40 (See AP.2) Differences Between Achievement in Social Studies and IQ for Grade 8, School 4, 1971-75 and Two Summers.

AP.41 Differences Between Achievement in Reading and IQ (i.e., percentile Metropolitan Achievement Test score minus percentile Otis-Lennon IQ) for Grade 3 at Schools 1 and 2, Grade 5 at Schools 3 and 4, and Grade 8^B at Schools 3 and 4, 1971-72 Through 1975-76 and Summer 1974 and Summer 1975.

AP.42 Differences Between Achievement in Math and IQ (i.e., percentile Metropolitan Achievement Test score minus Percentile Otis-Lennon IQ) for Grade 3 at Schools 1 and 2, Grade 5 at Schools 3 and 4, and Grade 8^B at Schools 3 and 4, 1971-72 Through 1975-76 and Summer 1974 and Summer 1975.

AP.43 Differences Between Achievement in Science and IQ (i.e., percentile Metropolitan Achievement Test score minus percentile Otis-Lennon IQ) for Grade 5 at Schools 3 and 4 and Grade 8^B at Schools 3 and 4, 1971-72 Through 1975-76 and Summer 1974 and Summer 1975.

AP.44 Differences Between Achievement in Social Studies and IQ (i.e., percentile Metropolitan Achievement Test score minus percentile Otis-Lennon IQ) for Grade 5 at Schools 3 and 4 and Grade 8^B at Schools 3 and 4, 1971-72 Through 1975-76 and Summer 1974 and Summer 1975.

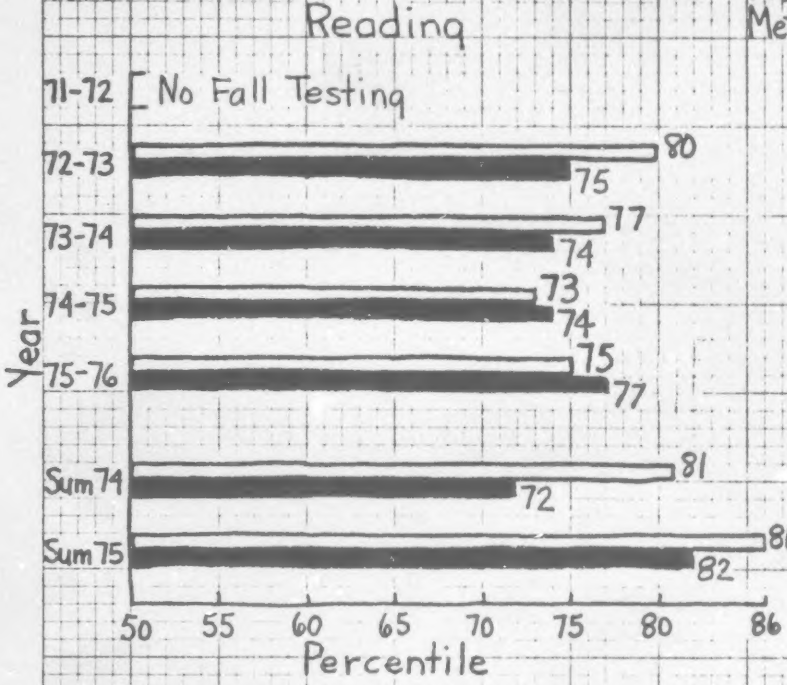
NATIONAL
12-280
Made in U.S.A.

School 1

3rd Grade

☐ = IQ ■ = Metro

AP.1



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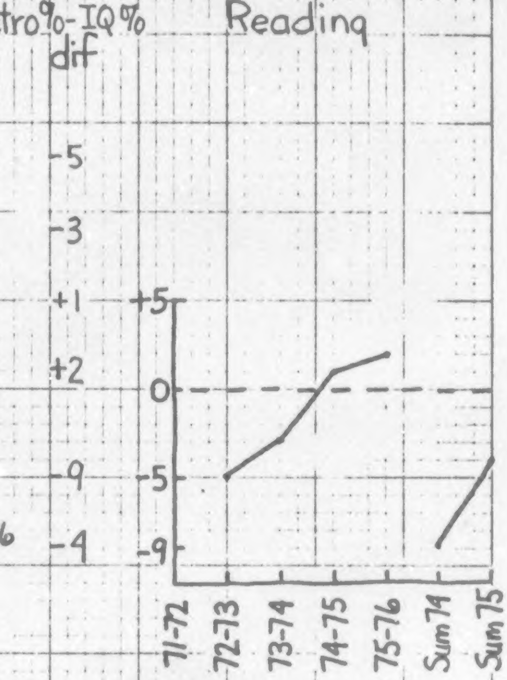

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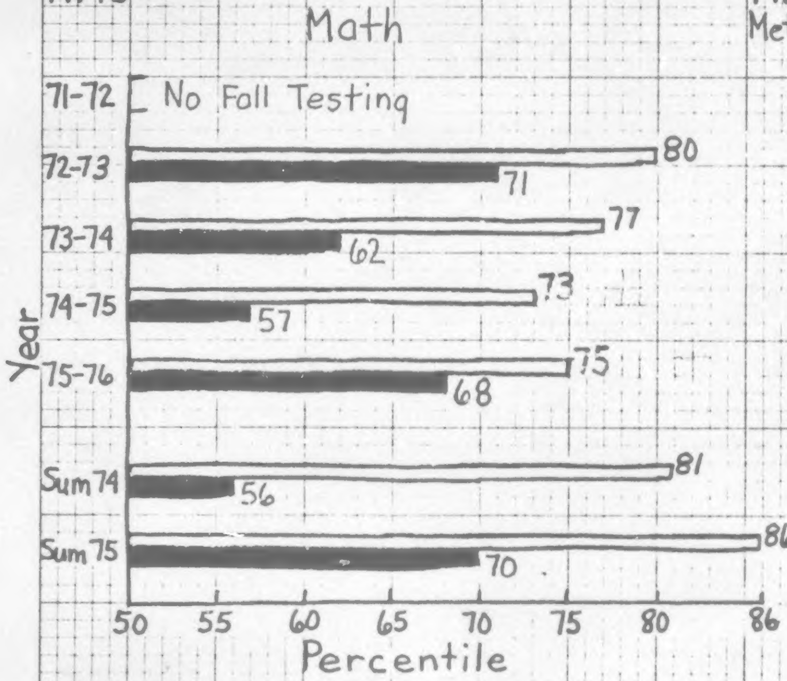

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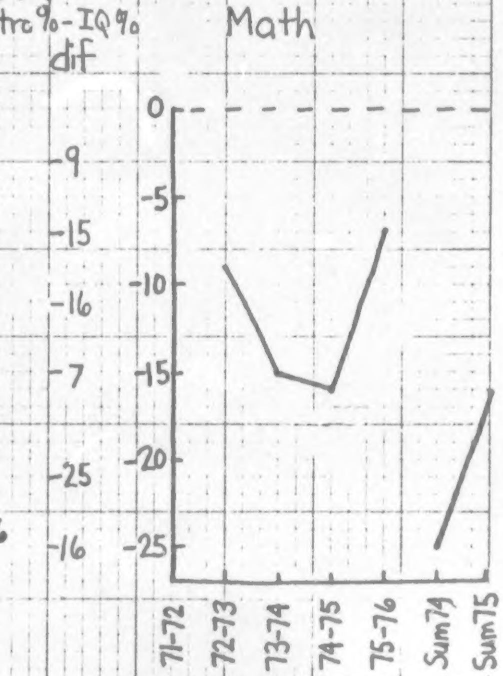


1

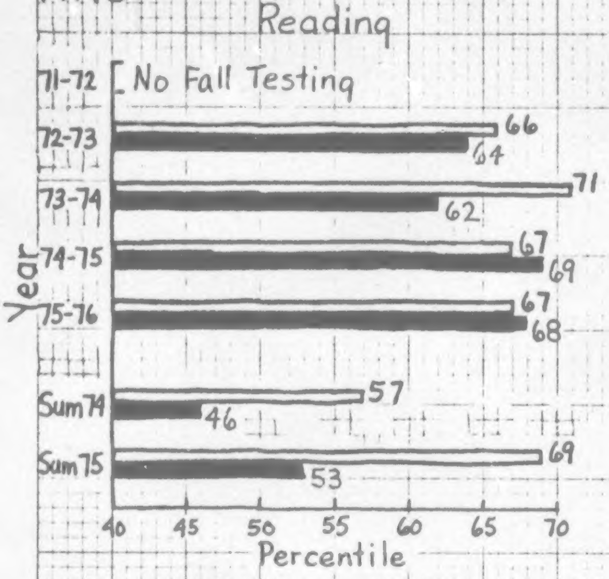
10 Squares to the Inch

School 2

3rd Grade

▭ = IQ ▬ = Metro

AP.5



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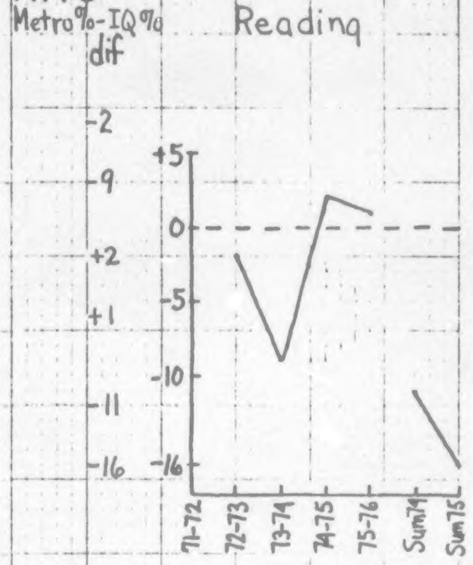

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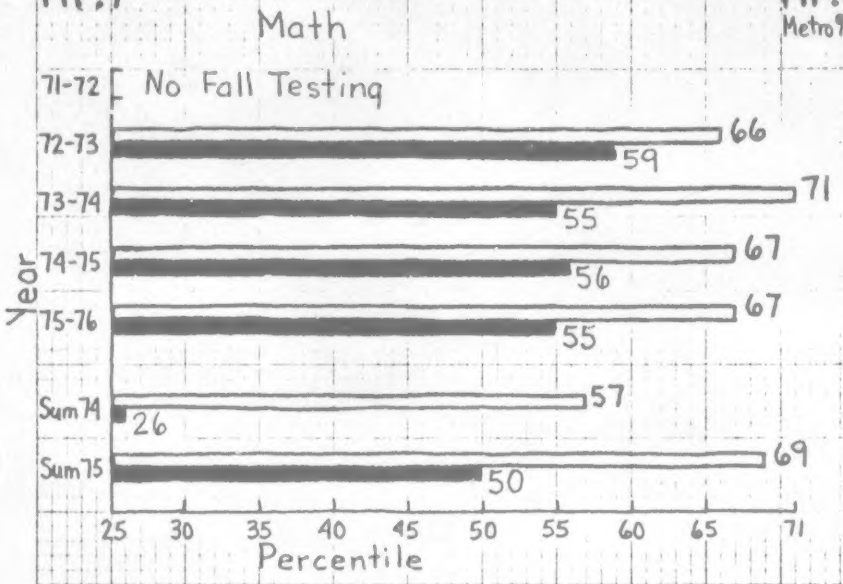

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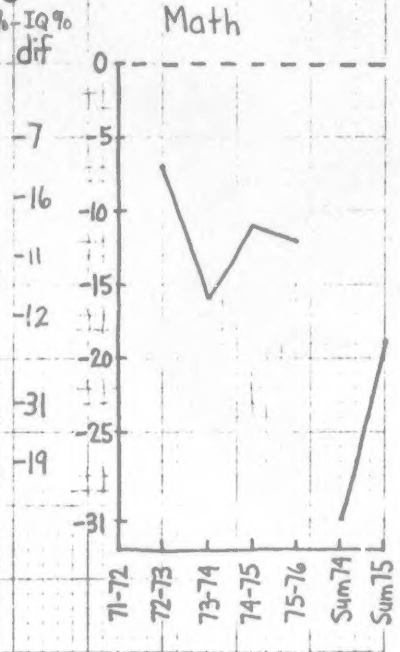


10 Squares to the Inch

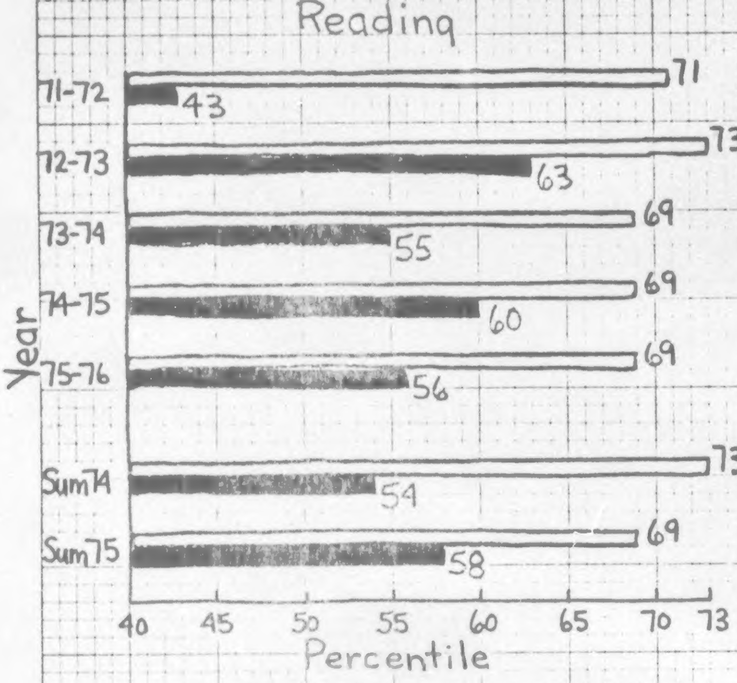
NATIONAL 12-280 Made in U.S.A.

School 3

5th Grade

▭ = IQ ▬ = Metro

AP. 9



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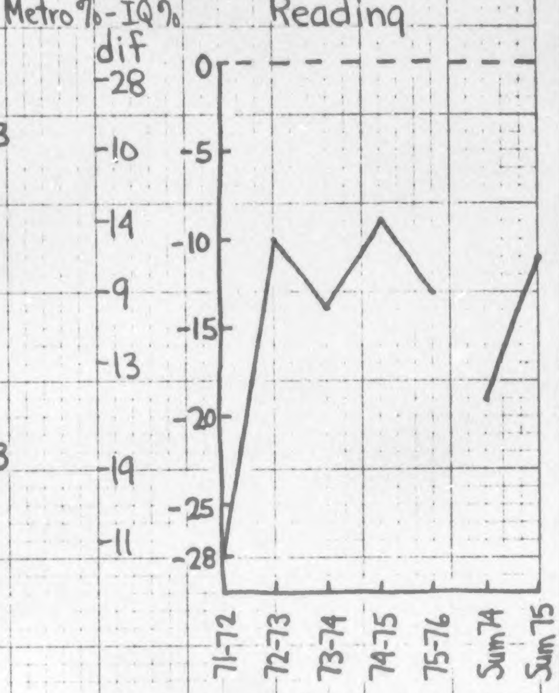

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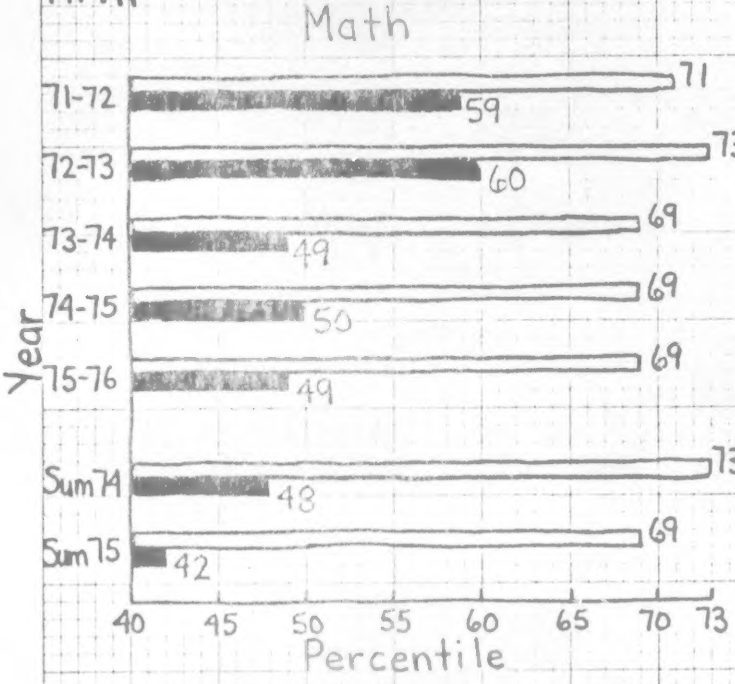

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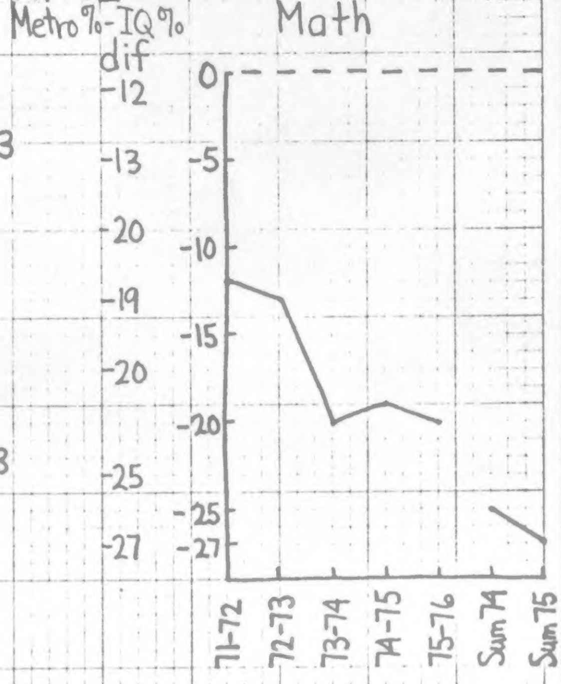


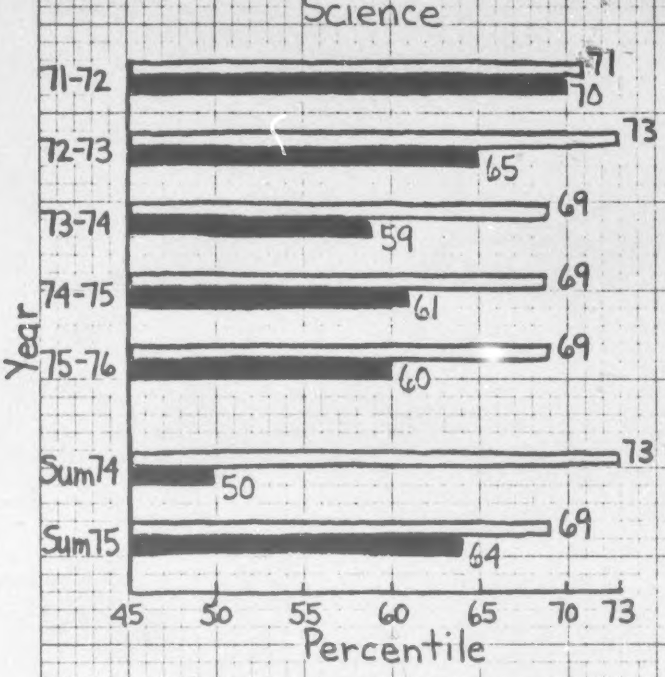
10 Squares to the Inch

School 3

5th Grade

▭ = IQ ▬ = Metro

AP. 13



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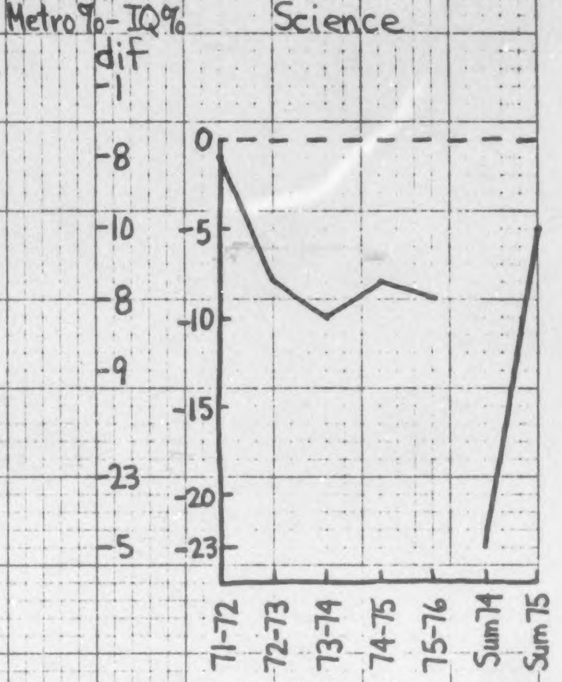

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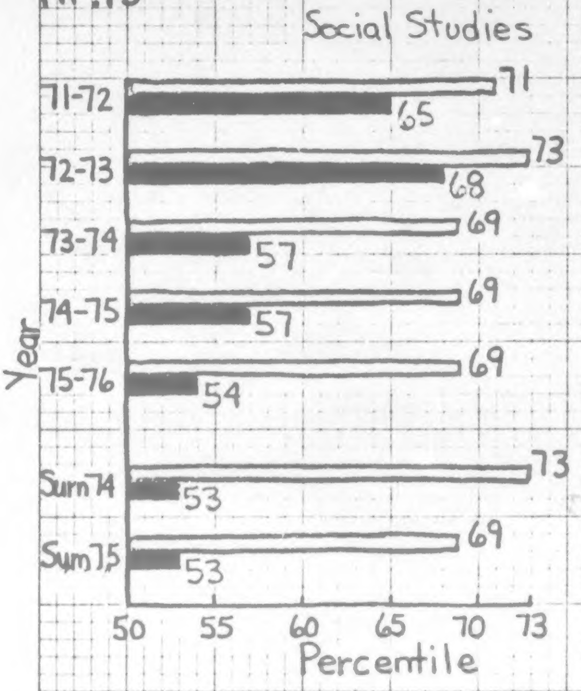

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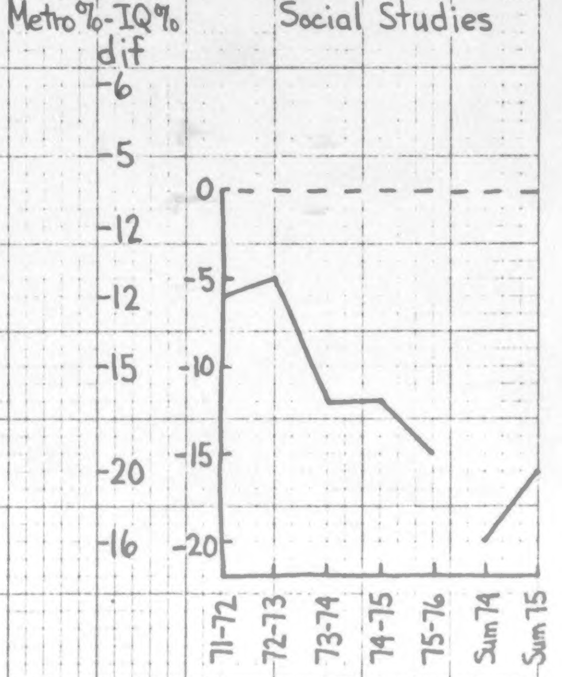
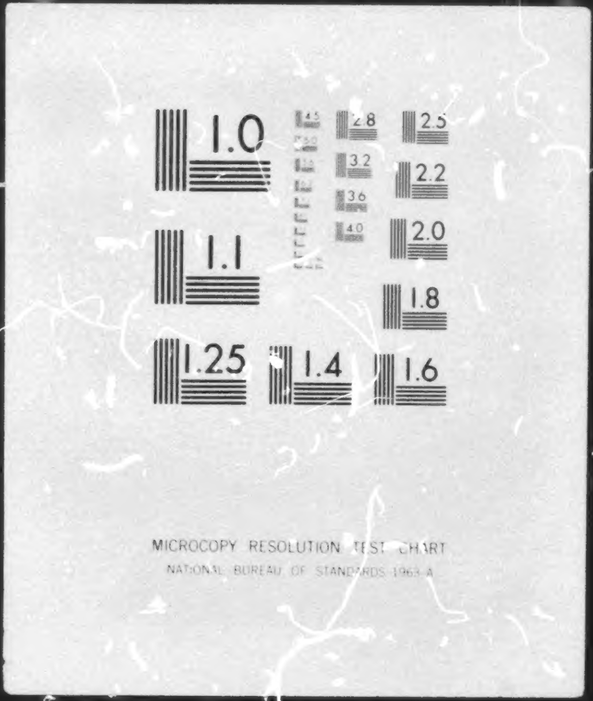


ares to the Inch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1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0

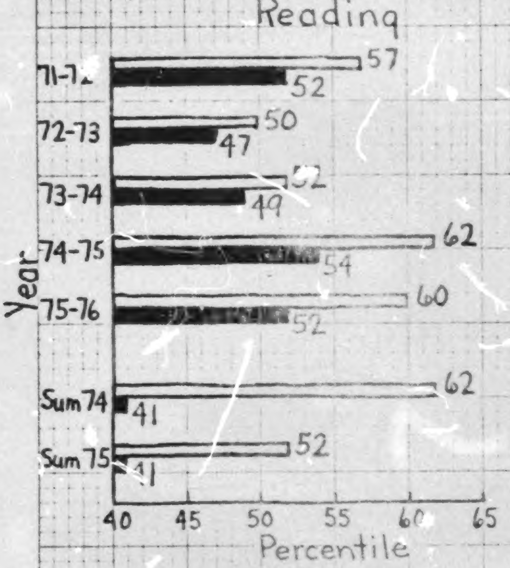
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

School 4

5th Grade

▭ = IQ ▬ = Metro

AP.17



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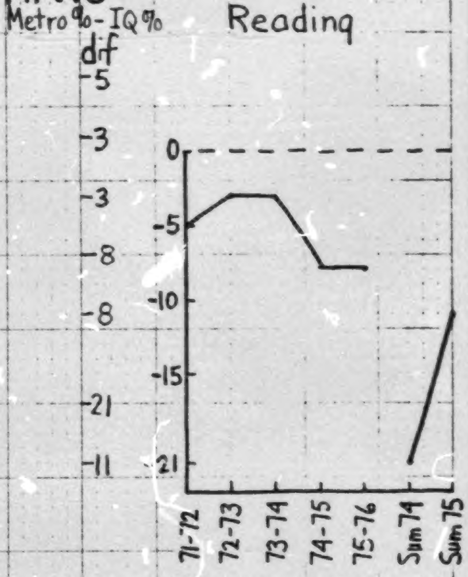

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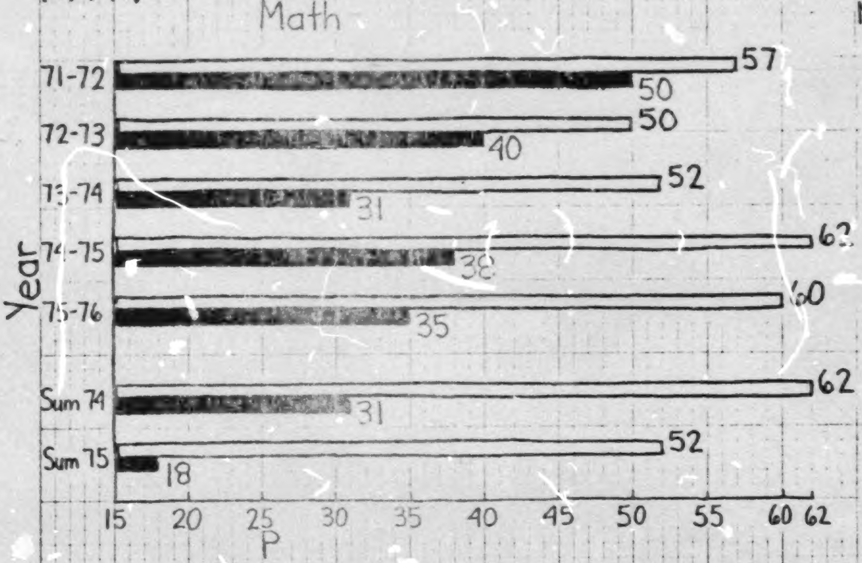

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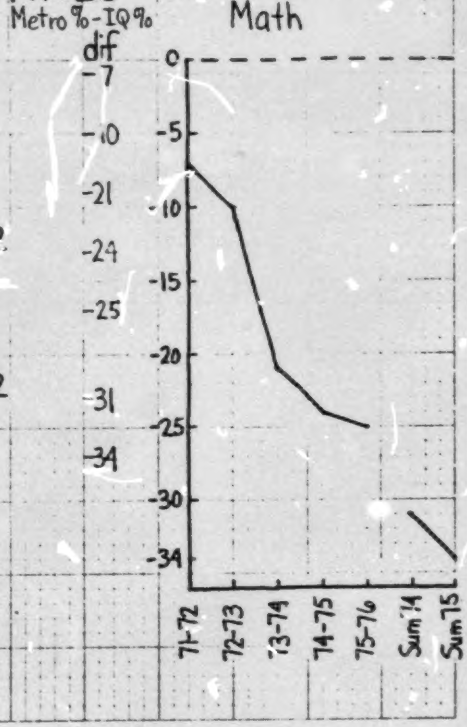


10 Squares to the Inch

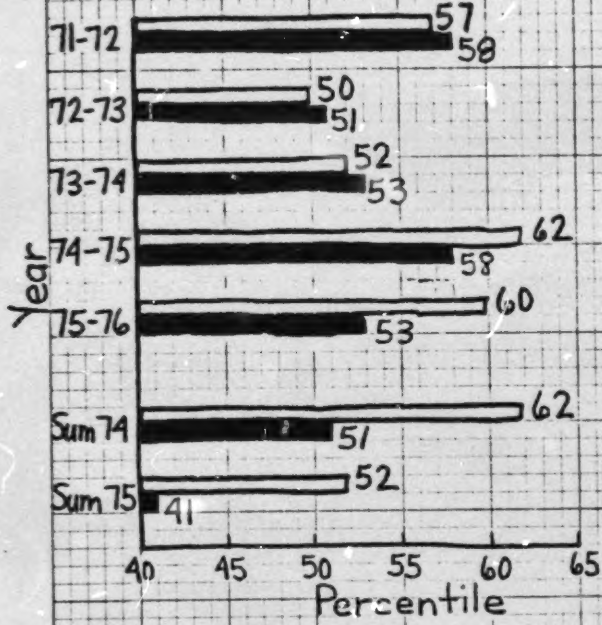
School 4

5th Grade

▭ = IQ ■ = Metro

AF. 21

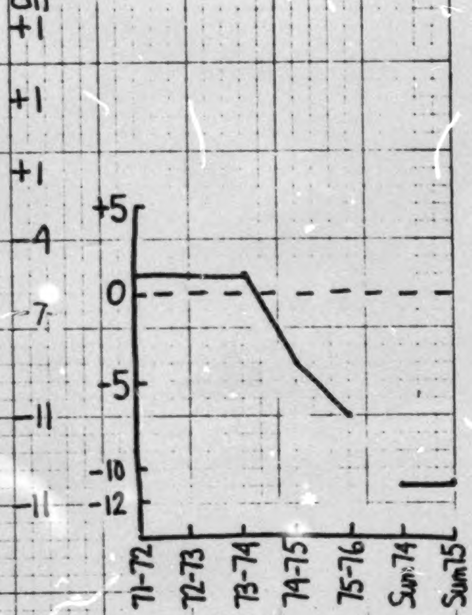
Science



AP. 22

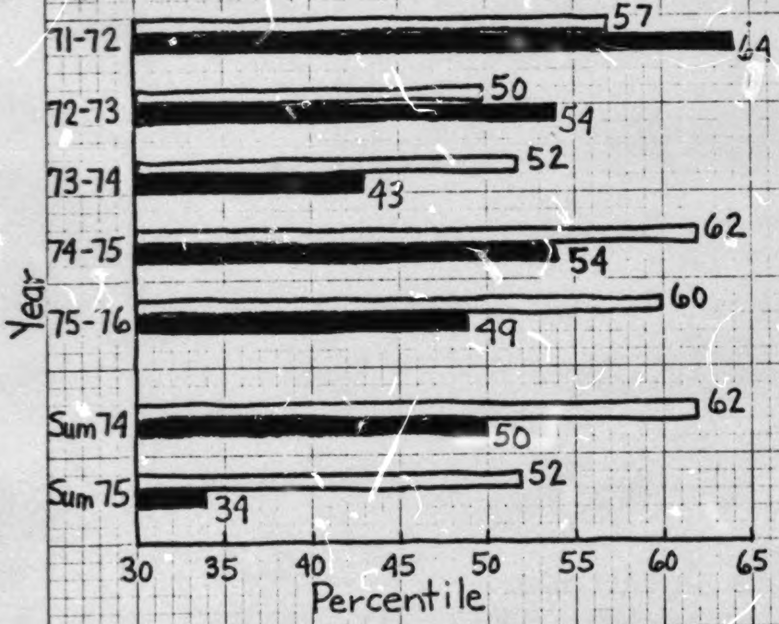
Metro%-IQ% dif

Science



AP. 23

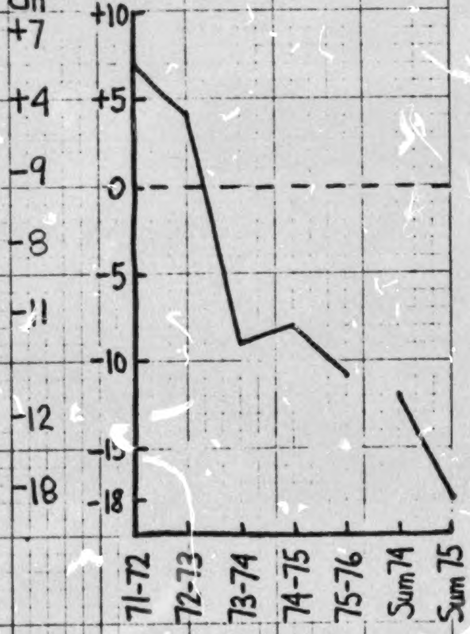
Social Studies



AP. 24

Metro%-IQ% dif

Social Studies



quares to the Inch

NATIONAL
12-280

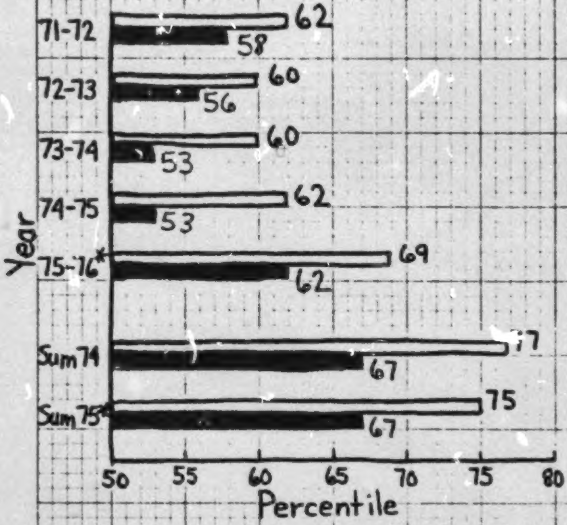
School 3

8th Grade

▭ = IQ % ■ = Metro %

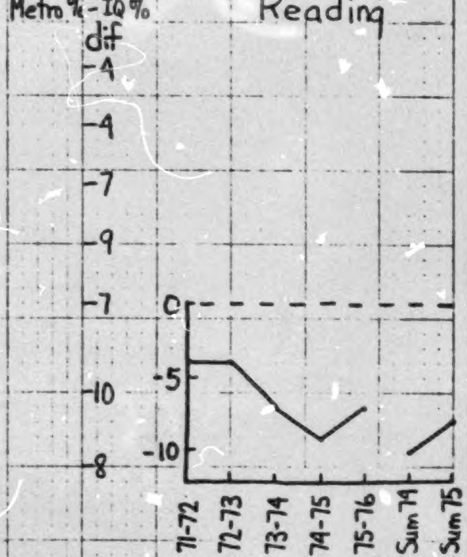
AP. 25

Reading



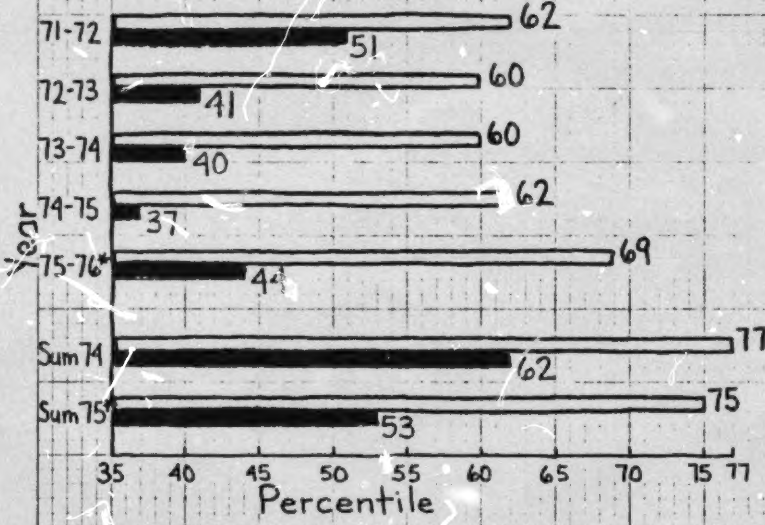
AP. 26

Reading



AP. 27

Math



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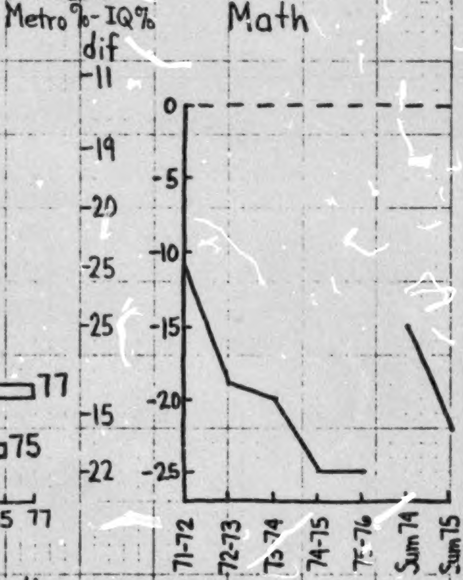
Math



*Tested 7th Grade - change in testing policy

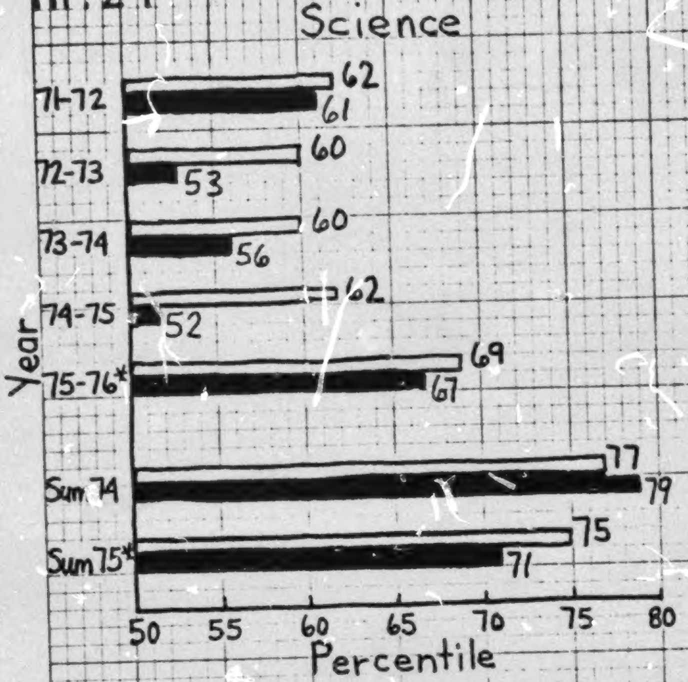
10 Squares to the Inch

School 3

8th Grade

▭ = IQ % ■ = Metro %

AP.29



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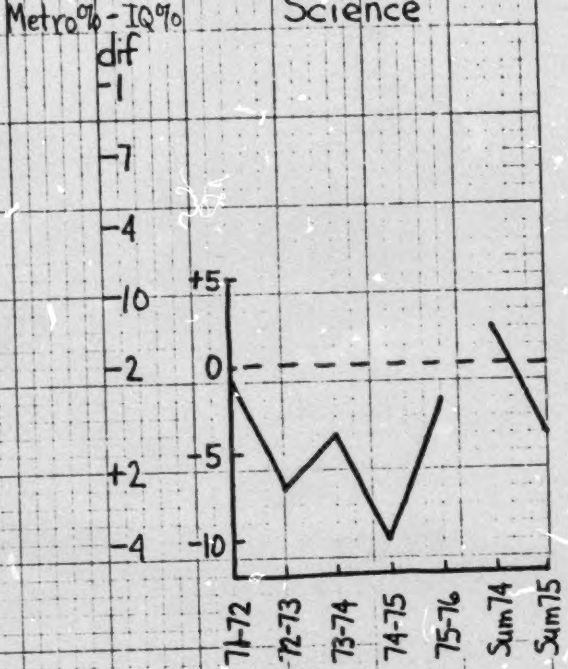

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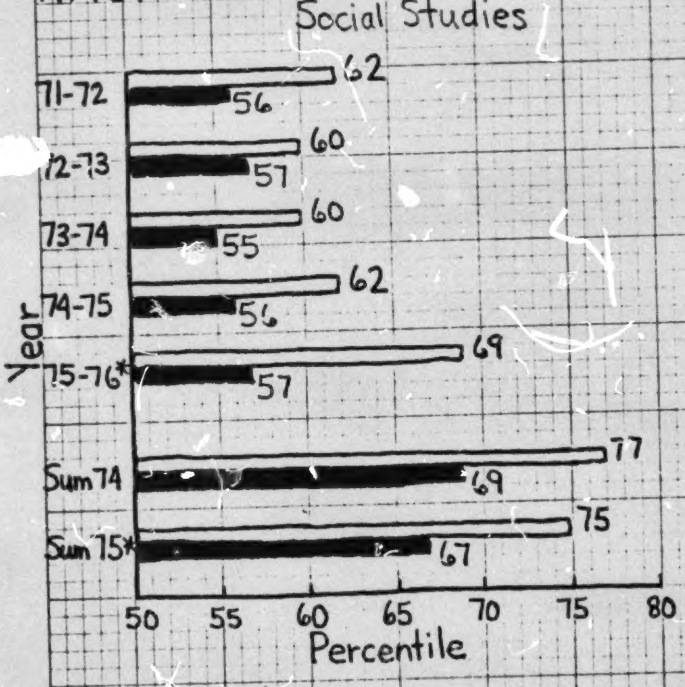

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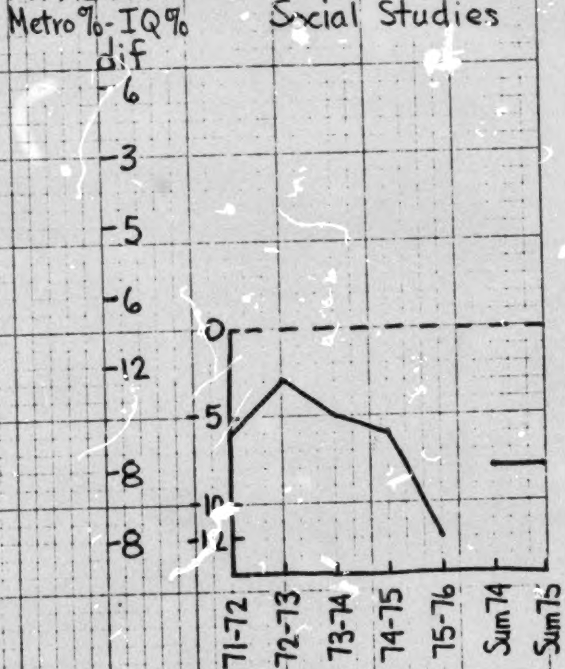


* Tested 7th Grade - change in testing policy

Squares to the Inch

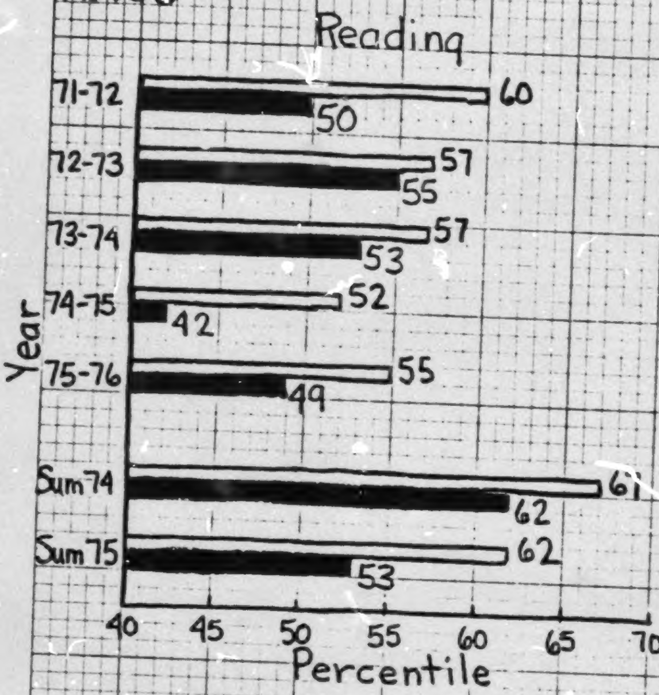
NATIONAL
12-280
U.S.A.

School 4

8th Grade

▭ = IQ ■ = Metro

AP.33



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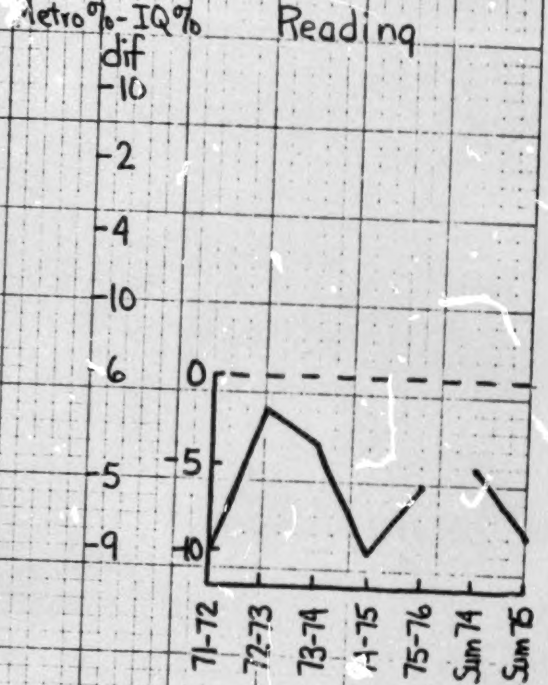

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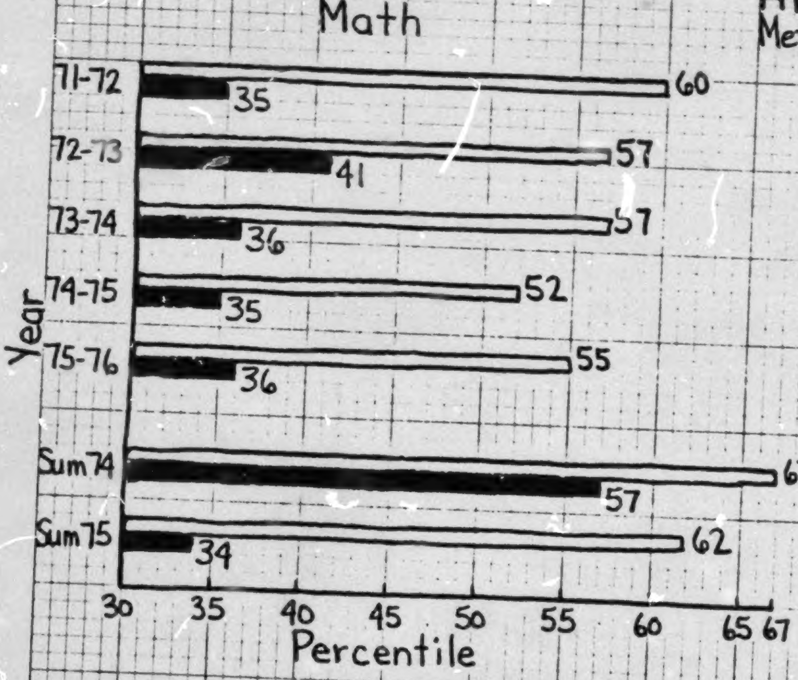

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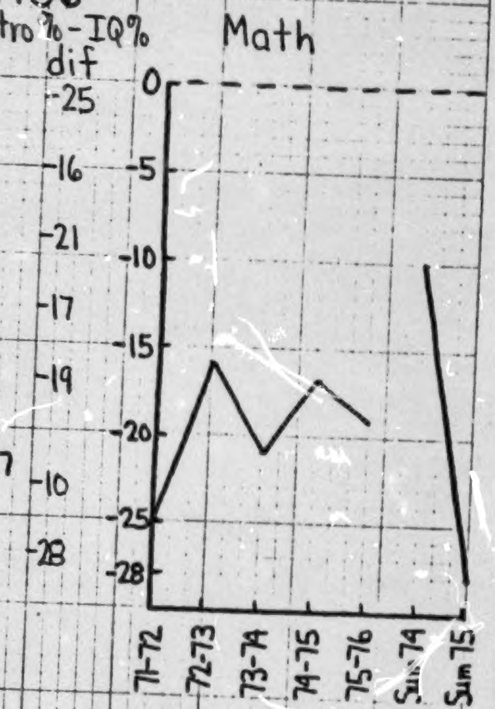


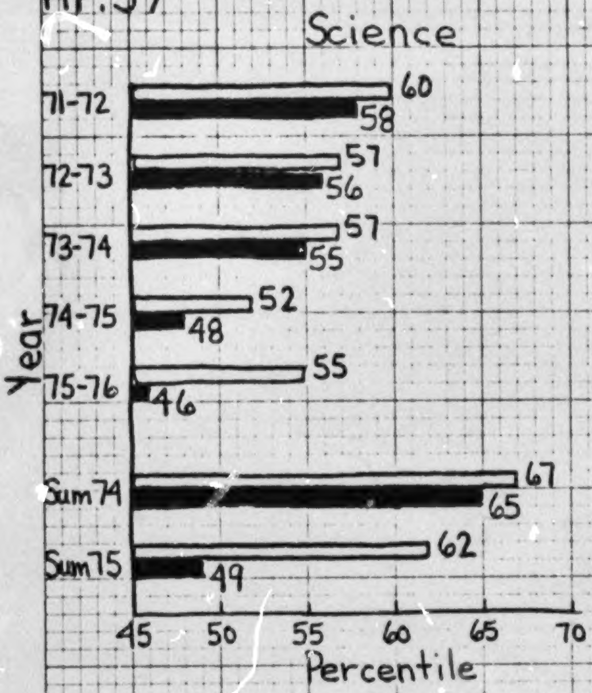
10 Squares to the Inch

School 4

8th Grade

▭ = IQ ■ = Metro

AP.37



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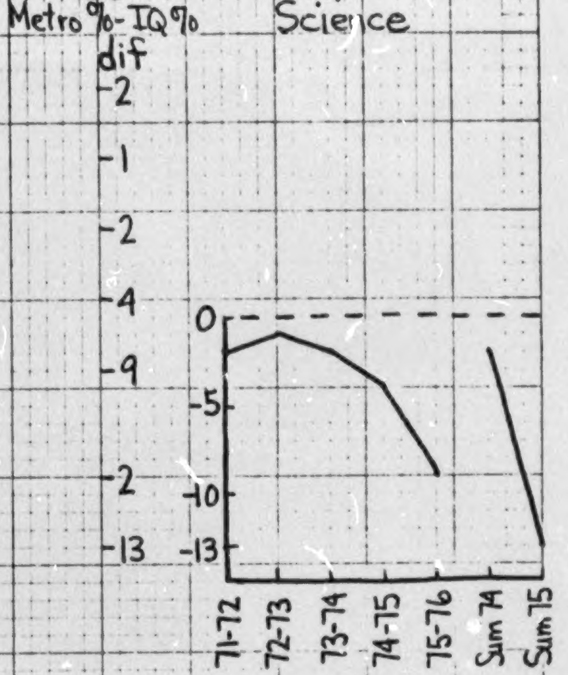

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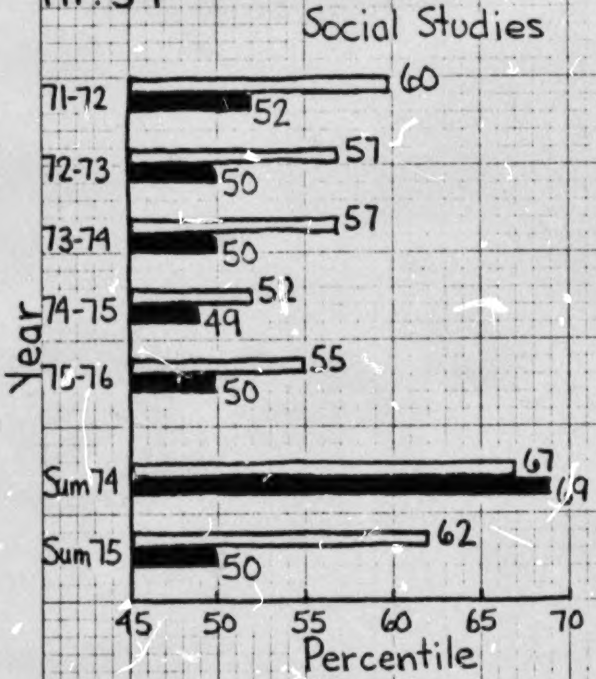

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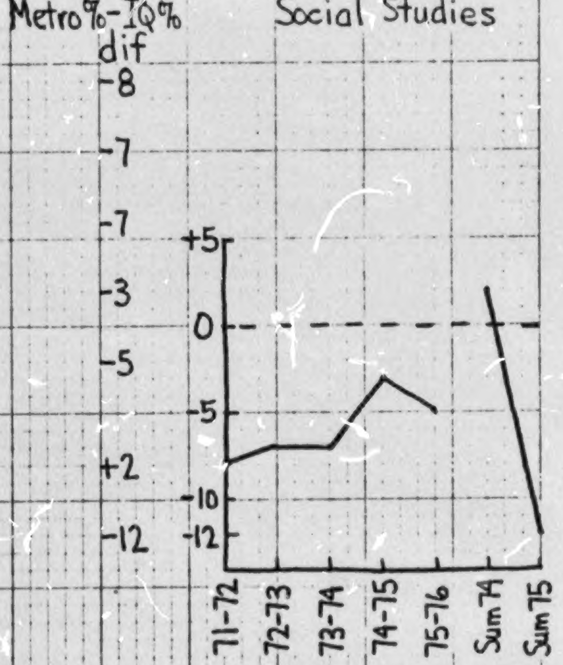


NATIONAL
12 280

Figure AP. 41

Reading

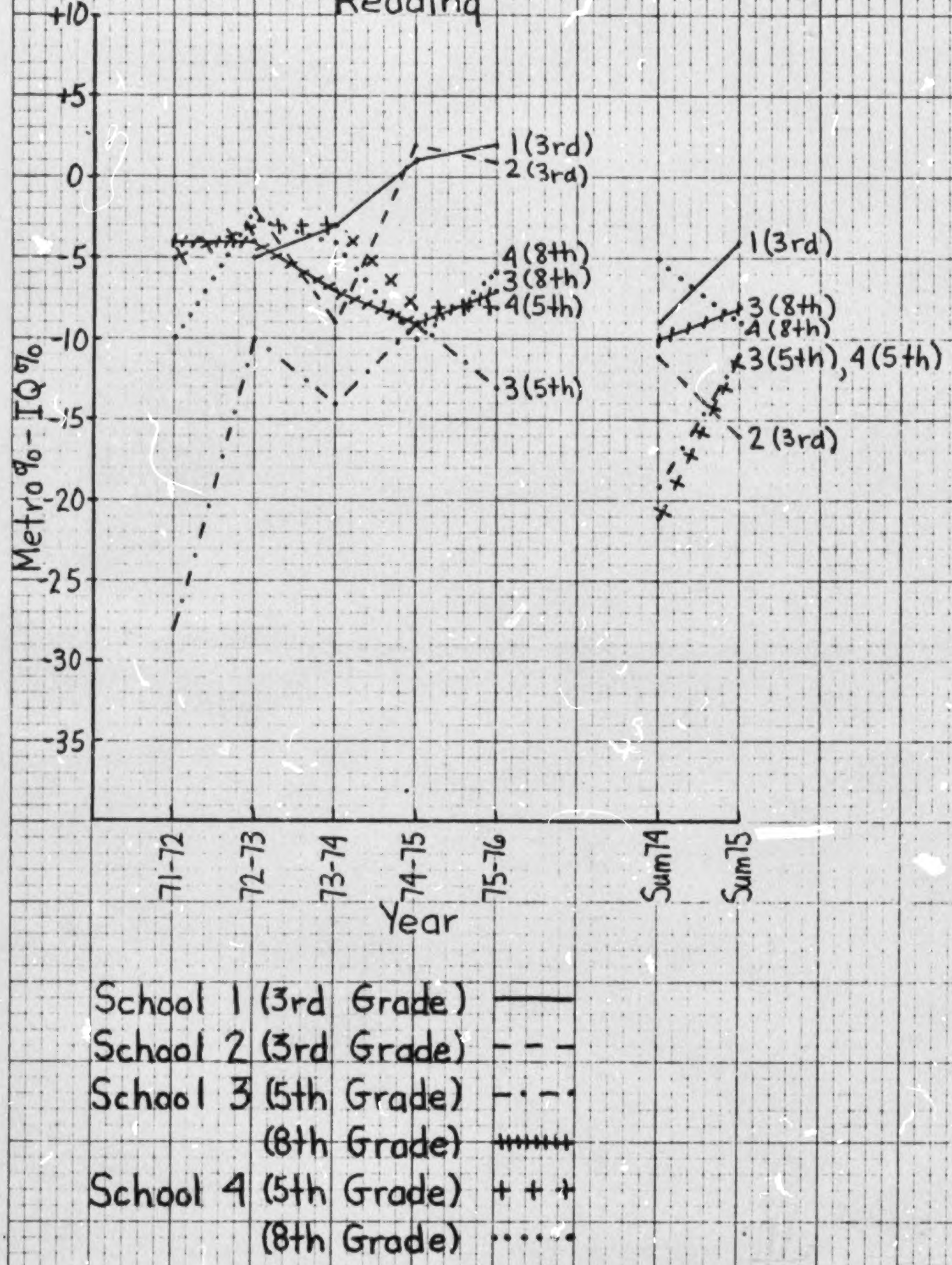
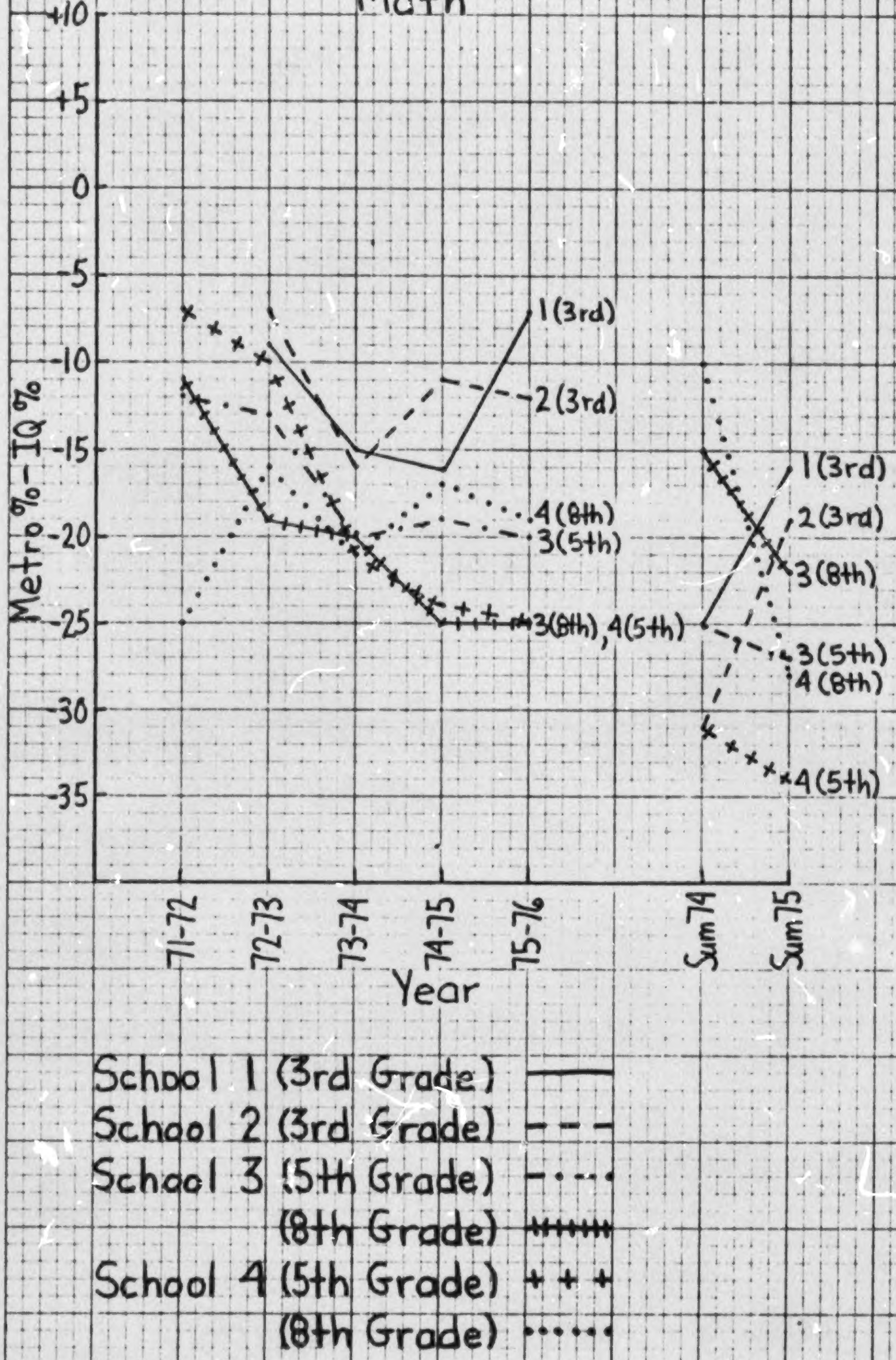


Figure AP. 42

Math



quares to the Inch

Figure AP.43

Science

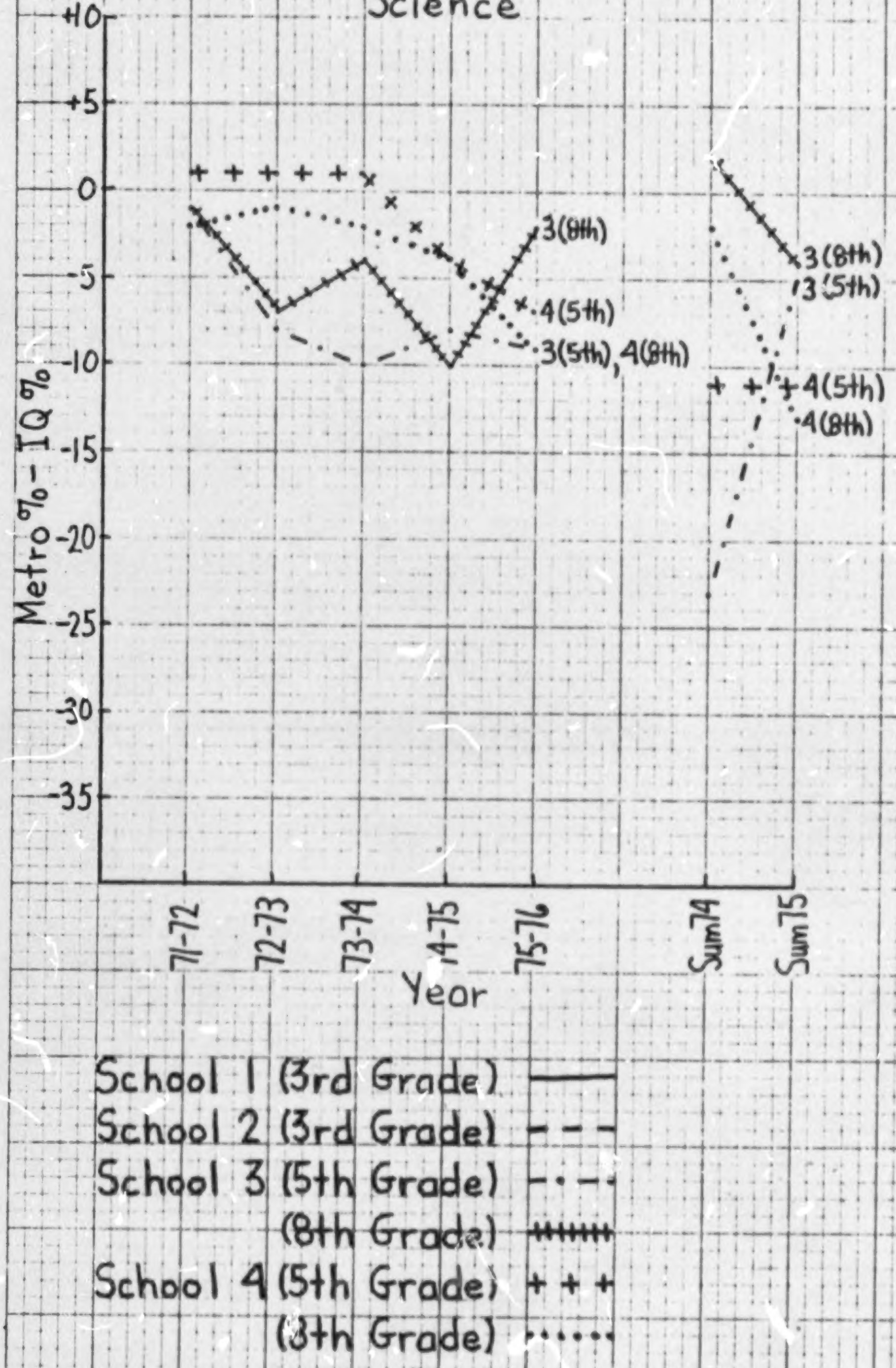
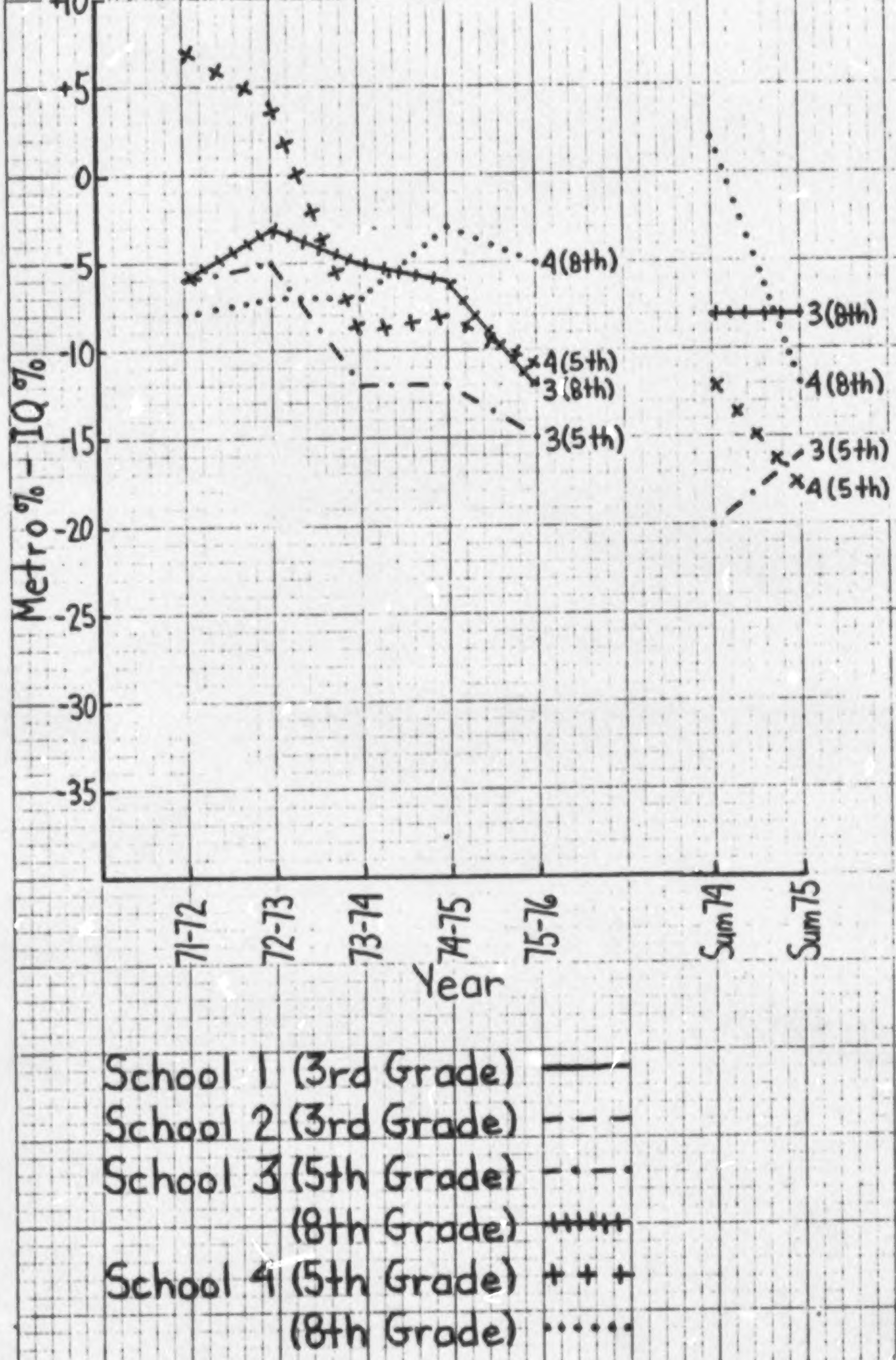


Figure AP. 44

Social Studies



APPENDIX B

FISCAL YEAR AVERAGE

TABLE AP.1

COST OF FARRAGUT AREA EDUCATIONAL PROGRAM BY SCHOOL

SCHOOL		CONTACT HOURS PER YEAR	NUMBER OF STUDENTS	TOTAL COST	UNIT COST
FARRAGUT HIGH SCHOOL	DIRECT COSTS	1610910	1296		
	SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES			508684.28	0.31577
	HEAT, LIGHT, & POWER			14954.83	0.00928
	TELEPHONE & TELEGRAPH			1708.09	0.00106
	CUSTODIAL SERVICES & SUPPLIES			23176.06	0.01439
	BUILDINGS AND SITES			21384.84	0.01328
	MAINTENANCE OF BUILDINGS			2444.21	0.00152
	TOTAL DIRECT COSTS			572352.31	0.35530
	INDIRECT COSTS				
	CENTRAL ADMINISTRATION			21304.24	0.01322
	INSTRUCTION			85881.19	0.05331
	CAPITAL OUTLAY & CLEARING ACCOUNTS			70672.13	0.04387
	ATTENDANCE AND HEALTH SERVICES			2796.03	0.00174
	*OPERATION OF PLANT			3828.31	0.00238
	*MAINTENANCE			12548.22	0.00779
	FIXED CHARGES			6469.99	0.00402
	FOOD SERVICES			6632.64	0.00412
	TRANSPORTATION			66881.03	0.04152
	*BUILDINGS AND SITES			0.00	0.00000
	TOTAL INDIRECT COSTS			277013.77	0.17196
	FINAL TOTAL COSTS			849366.08	0.52726
FARRAGUT MIDDLE SCHOOL	DIRECT COSTS	1032366	895		
	SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES			271671.09	0.26315
	HEAT, LIGHT, & POWER			15257.76	0.01478
	TELEPHONE & TELEGRAPH			710.75	0.00069
	CUSTODIAL SERVICES & SUPPLIES			17317.26	0.01677
	BUILDINGS AND SITES			12522.25	0.01213
	MAINTENANCE OF BUILDINGS			1016.63	0.00098
	TOTAL DIRECT COSTS			318495.73	0.30851
	INDIRECT COSTS				
	CENTRAL ADMINISTRATION			13662.55	0.01323
	INSTRUCTION			55012.47	0.05329
	CAPITAL OUTLAY & CLEARING ACCOUNTS			45296.63	0.04388
	ATTENDANCE AND HEALTH SERVICES			1789.14	0.00173
	*OPERATION OF PLANT			2458.45	0.00238
	*MAINTENANCE			8046.68	0.00779
	FIXED CHARGES			4172.83	0.00404
	FOOD SERVICES			4252.26	0.00412
	TRANSPORTATION			42841.10	0.04150
	*BUILDINGS AND SITES			0.00	0.00000
	TOTAL INDIRECT COSTS			177532.11	0.17197
	FINAL TOTAL COSTS			496027.84	0.48048

TABLE AP. 1 (cont.)

FARRAGUT PRIMARY SCHOOL	DIRECT COSTS	609738	572		
	SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES			173249.22	0.28414
	HEAT, LIGHT, & POWER			13069.11	0.02143
	TELEPHONE & TELEGRAPH			721.09	0.00118
	CUSTODIAL SERVICES & SUPPLIES			14818.06	0.02430
	BUILDINGS AND SITES			127015.22	0.20831
	MAINTENANCE OF BUILDINGS			535.28	0.00088
	TOTAL DIRECT COSTS			329407.97	0.54025
	INDIRECT COSTS				
	CENTRAL ADMINISTRATION			8018.48	0.01315
	INSTRUCTION			32626.17	0.05351
	CAPITAL OUTLAY & CLEARING ACCOUNTS			26722.32	0.04383
	ATTENDANCE AND HEALTH SERVICES			1071.18	0.00176
	*OPERATION OF PLANT			1425.09	0.00234
	*MAINTENANCE			4725.65	0.00775
	FIXED CHARGES			2323.34	0.00381
	FOOD SERVICES			2502.54	0.00410
	TRANSPORTATION			25410.55	0.04167
	*BUILDINGS AND SITES			0.00	0.00000
	TOTAL INDIRECT COSTS			104825.32	0.17192
	FINAL TOTAL COSTS			434233.29	0.71216
CEDAR BLUFF MIDDLE SCHOOL	DIRECT COSTS	1410039	1222		
	SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES			387719.58	0.27497
	HEAT, LIGHT, & POWER			20615.96	0.01462
	TELEPHONE & TELEGRAPH			1097.03	0.00078
	CUSTODIAL SERVICES & SUPPLIES			30852.32	0.02188
	BUILDINGS AND SITES			318111.50	0.22560
	MAINTENANCE OF BUILDINGS			1759.53	0.00125
	TOTAL DIRECT COSTS			760155.92	0.53910
	INDIRECT COSTS				
	CENTRAL ADMINISTRATION			18703.76	0.01326
	INSTRUCTION			75024.17	0.05321
	CAPITAL OUTLAY & CLEARING ACCOUNTS			61893.68	0.04390
	ATTENDANCE AND HEALTH SERVICES			2431.45	0.00172
	*OPERATION OF PLANT			3380.57	0.00240
	*MAINTENANCE			11013.14	0.00781
	FIXED CHARGES			5818.64	0.00413
	FOOD SERVICES			5815.42	0.00412
	TRANSPORTATION			58422.88	0.04143
	*BUILDINGS AND SITES			0.00	0.00000
	TOTAL INDIRECT COSTS			242503.71	0.17198
	FINAL TOTAL COSTS			1002659.63	0.71109

TABLE AP. 1 (cont.)

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CEDAR BLUFF PRIMARY SCHOOL DIRECT COSTS                                       1059033        994
                        SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES                               326573.85   0.30837
                        HEAT, LIGHT, & POWER                                                                  31992.19   0.03021
                        TELEPHONE & TELEGRAPH                                                                   913.56   0.00086
                        CUSTODIAL SERVICES & SUPPLIES                                                         23022.65   0.02174
                        BUILDINGS AND SITES                                                                  190736.78   0.18010
                        MAINTENANCE OF BUILDINGS                                                                974.19   0.00092

                             TOTAL DIRECT COSTS                                                              574213.22   0.54221

                       INDIRECT COSTS
                        CENTRAL ADMINISTRATION                                                                14004.43   0.01322
                        INSTRUCTION                                                                           56462.71   0.05332
                        CAPITAL OUTLAY & CLEARING ACCOUNTS                                                    46460.01   0.04387
                        ATTENDANCE AND HEALTH SERVICES                                                         1838.50   0.00174
                       *OPERATION OF PLANT                                                                     2516.12   0.00238
                       *MAINTENANCE                                                                            8248.70   0.00779
                        FIXED CHARGES                                                                          4249.99   0.00401
                        FOOD SERVICES                                                                          4360.16   0.00412
                        TRANSPORTATION                                                                        43971.10   0.04152
                       *BUILDINGS AND SITES                                                                       0.00   0.00000

                             TOTAL INDIRECT COSTS                                                            182111.71   0.17196

                             FINAL TOTAL COSTS                                                               756324.93   0.71417
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FISCAL YEAR 1974-75

TABLE AP. 2

COST OF FARRAGUT AREA EDUCATIONAL PROGRAM BY SCHOOL

SCHOOL		CONTACT HOURS PER YEAR	NUMBER OF STUDENTS	TOTAL COST	UNIT COST
FARRAGUT HIGH SCHOOL	DIRECT COSTS	1803067	1439		
	SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES			716824.00	0.39756
	HEAT, LIGHT, & POWER			22569.21	0.01252
	TELEPHONE & TELEGRAPH			1765.62	0.00098
	CUSTODIAL SERVICES & SUPPLIES			32129.94	0.01782
	BUILDINGS AND SITES			21384.84	0.01186
	MAINTENANCE OF BUILDINGS			43217.68	0.02397
	TOTAL DIRECT COSTS			837891.29	0.46470
	INDIRECT COSTS				
	CENTRAL ADMINISTRATION			25214.68	0.01398
	INSTRUCTION			120539.24	0.06685
	CAPITAL OUTLAY & CLEARING ACCOUNTS			87723.88	0.04865
	ATTENDANCE AND HEALTH SERVICES			2924.22	0.00162
	*OPERATION OF PLANT			3104.17	0.00172
	*MAINTENANCE			30878.44	0.01713
	FIXED CHARGES			23330.67	0.01294
	FOOD SERVICES			9988.90	0.00554
	TRANSPORTATION			90524.86	0.05021
	*BUILDINGS AND SITES			0.00	0.00000
	TOTAL INDIRECT COSTS			394229.06	0.21864
	FINAL TOTAL COSTS			1232120.35	0.68335
FARRAGUT MIDDLE SCHOOL	DIRECT COSTS	1162336	999		
	SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES			344264.00	0.29618
	HEAT, LIGHT, & POWER			23883.40	0.02055
	TELEPHONE & TELEGRAPH			817.20	0.00070
	CUSTODIAL SERVICES & SUPPLIES			33807.51	0.02909
	BUILDINGS AND SITES			12522.25	0.01077
	MAINTENANCE OF BUILDINGS			8014.78	0.00690
	TOTAL DIRECT COSTS			423309.14	0.36419
	INDIRECT COSTS				
	CENTRAL ADMINISTRATION			16254.49	0.01398
	INSTRUCTION			77704.88	0.06685
	CAPITAL OUTLAY & CLEARING ACCOUNTS			56550.66	0.04865
	ATTENDANCE AND HEALTH SERVICES			1885.08	0.00162
	*OPERATION OF PLANT			2001.08	0.00172
	*MAINTENANCE			19905.60	0.01713
	FIXED CHARGES			15039.97	0.01294
	FOOD SERVICES			6439.28	0.00554
	TRANSPORTATION			58356.29	0.05021
	*BUILDINGS AND SITES			0.00	0.00000
	TOTAL INDIRECT COSTS			254137.33	0.21864

TABLE AP. 2 (cont.)

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FARRAGUT PRIMARY SCHOOL    DIRECT COSTS                                                808722       753
                             SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES                             269851.00   0.33368
                             HEAT, LIGHT, & POWER                                                                15346.48   0.01898
                             TELEPHONE & TELEGRAPH                                                                 788.44   0.00097
                             CUSTODIAL SERVICES & SUPPLIES                                                       18919.97   0.02339
                             BUILDINGS AND SITES                                                                127015.22   0.15706
                             MAINTENANCE OF BUILDINGS                                                             4866.90   0.00602

                                  TOTAL DIRECT COSTS                                                             436788.01   0.54010

                           INDIRECT COSTS
                             CENTRAL ADMINISTRATION                                                              11309.44   0.01398
                             INSTRUCTION                                                                         54064.96   0.06685
                             CAPITAL OUTLAY & CLEARING ACCOUNTS                                                  39346.42   0.04865
                             ATTENDANCE AND HEALTH SERVICES                                                       1311.59   0.00162
                            *OPERATION OF PLANT                                                                   1392.30   0.00172
                            *MAINTENANCE                                                                         13849.78   0.01713
                             FIXED CHARGES                                                                       10464.41   0.01294
                             FOOD SERVICES                                                                        4480.28   0.00554
                             TRANSPORTATION                                                                      40602.73   0.05021
                            *BUILDINGS AND SITES                                                                     0.00   0.00000

                                  TOTAL INDIRECT COSTS                                                           176821.89   0.21864

                                  FINAL TOTAL COSTS                                                              613609.90   0.75874

CEDAR BLUFF MIDDLE SCHOOL  DIRECT COSTS                                               1506732      1295
                             SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES                             475437.00   0.31554
                             HEAT, LIGHT, & POWER                                                                31228.76   0.02073
                             TELEPHONE & TELEGRAPH                                                                1089.90   0.00072
                             CUSTODIAL SERVICES & SUPPLIES                                                       32298.95   0.02144
                             BUILDINGS AND SITES                                                                318111.50   0.21113
                             MAINTENANCE OF BUILDINGS                                                            40816.08   0.02709

                                  TOTAL DIRECT COSTS                                                             898982.19   0.59664

                           INDIRECT COSTS
                             CENTRAL ADMINISTRATION                                                              21070.64   0.01398
                             INSTRUCTION                                                                        100728.55   0.06685
                             CAPITAL OUTLAY & CLEARING ACCOUNTS                                                  73306.41   0.04865
                             ATTENDANCE AND HEALTH SERVICES                                                       2443.63   0.00162
                            *OPERATION OF PLANT                                                                   2593.95   0.00172
                            *MAINTENANCE                                                                         25803.55   0.01713
                             FIXED CHARGES                                                                       19496.26   0.01294
                             FOOD SERVICES                                                                        8347.22   0.00554
                             TRANSPORTATION                                                                      75647.05   0.05021
                            *BUILDINGS AND SITES                                                                     0.00   0.00000

                                  TOTAL INDIRECT COSTS                                                           329427.31   0.21864

                                  FINAL TOTAL COSTS                                                             1228419.50   0.81529
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TABLE AP. 2 (cont.)

CEDAR BLUFF PRIMARY SCHOOL DIRECT COSTS	1258728	1172		
SALARIES - TEACHERS, PRINCIPALS, CLERKS, TEACHER AIDES			428450.00	0.34038
HEAT, LIGHT, & POWER			34898.43	0.02773
TELEPHONE & TELEGRAPH			969.43	0.00077
CUSTODIAL SERVICES & SUPPLIES			26642.38	0.02117
BUILDINGS AND SITES			190736.78	0.15153
MAINTENANCE OF BUILDINGS			12857.57	0.01021
TOTAL DIRECT COSTS			694554.59	0.55179
INDIRECT COSTS				
CENTRAL ADMINISTRATION			17602.47	0.01398
INSTRUCTION			84148.91	0.06685
CAPITAL OUTLAY & CLEARING ACCOUNTS			61240.38	0.04865
ATTENDANCE AND HEALTH SERVICES			2041.41	0.00162
*OPERATION OF PLANT			2167.03	0.00172
*MAINTENANCE			21556.36	0.01713
FIXED CHARGES			16287.23	0.01294
FOOD SERVICES			6973.29	0.00554
TRANSPORTATION			63195.75	0.05021
*BUILDINGS AND SITES			0.00	0.00000
TOTAL INDIRECT COSTS			275212.82	0.21864
FINAL TOTAL COSTS			969767.41	0.77043